


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 920-23L		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 0577A		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> Ute Tribe		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	1491 FSL 517 FWL	NWSW	23	9.0 S	20.0 E	S
<b>Top of Uppermost Producing Zone</b>	1491 FSL 517 FWL	NWSW	23	9.0 S	20.0 E	S
<b>At Total Depth</b>	1491 FSL 517 FWL	NWSW	23	9.0 S	20.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 517		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 2091		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 1000		<b>26. PROPOSED DEPTH</b> MD: 10490 TVD: 10490		
<b>27. ELEVATION - GROUND LEVEL</b> 4860		<b>28. BOND NUMBER</b> WYB000291		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		

**ATTACHMENTS****VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP
<b>NAME</b> Danielle Piernot	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b>	<b>PHONE</b> 720 929-6156
	<b>EMAIL</b> danielle.piernot@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047505730000	<b>APPROVAL</b>  Permit Manager



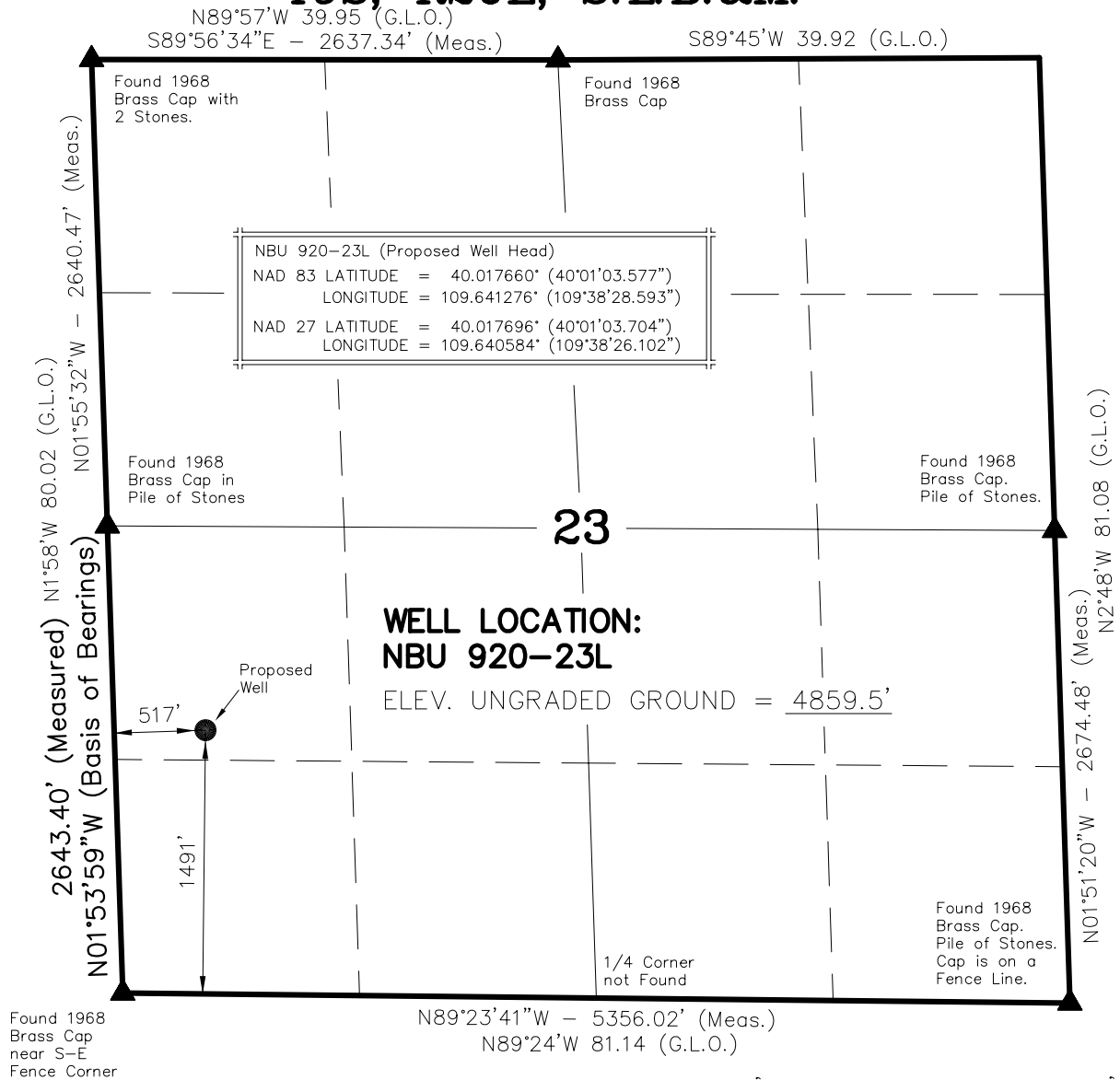
Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10490		
Pipe	Grade	Length	Weight			
	Grade HCP-110 LT&C	890	11.6			
	Grade I-80 LT&C	9600	11.6			



Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2660		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2660	36.0			

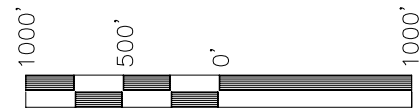


# T9S, R20E, S.L.B.&M.



## NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
- 3. Bearings are based on Global Positioning Satellite observations.
- 4. Basis of elevation is the Northwest Corner of Section 12, T9S, R20E, S.L.B.&M. The elevation of this Section Corner is shown on the Ouray SE 7.5 Min. Quadrangle as being 4676'.



SCALE

## SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 362251  
STATE OF UTAH

**Kerr-McGee**  
**Oil & Gas Onshore, LP**

1099 18th Street - Denver, Colorado 80202

**NBU 920-23L**  
**WELL PLAT**  
**1491' FSL, 517' FWL**  
**NW 1/4 SW 1/4 OF SECTION 23, T9S, R20E,**  
**S.L.B.&M. UTAH COUNTY, UTAH.**

CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

ENGINEERING & LAND SURVEYING, INC.

209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

DATE SURVEYED: 01-07-09	SURVEYED BY: B.J.S.	SHEET <b>1</b> OF 9
DATE DRAWN: 01-27-09	DRAWN BY: K.K.O.	
SCALE: 1" = 1000'	Date Last Revised:	



**NBU 920-23L**

Surface: 1,491' FSL, 517' FWL (NW/4SW/4)

Sec. 23 T9S R20E

Uintah, Utah

Mineral Lease: UTU 0577A

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,706'	
Birds Nest	1,952'	Water
Mahogany	2,460'	Water
Wasatch	5,083'	Gas
Mesaverde	8,363'	Gas
MVU2	9,319'	Gas
MVL1	9,723'	Gas
TD	10,490'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,490' TD, approximately equals 6,535 psi (calculated at 0.62 psi/foot).



Maximum anticipated surface pressure equals approximately 4,228 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*



*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*



*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

**10. Other Information:**

*Please refer to the attached Drilling Program.*





**KERR-McGEE OIL & GAS ONSHORE LP**  
**DRILLING PROGRAM**

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP				DATE	July 9, 2009			
WELL NAME	NBU 920-23L				TD	10,490' MD/TVD			
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah		FINISHED ELEVATION	4,859'
SURFACE LOCATION	NW/4 SW/4	1,491' FSL	517' FWL	Sec 23	T 9S	R 20E	BHL		Straight Hole
	Latitude: 40.017660		Longitude: -109.641276		NAD 83				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.								

GEOLOGICAL				MECHANICAL		
FORMATION				HOLE SIZE	CASING SIZE	MUD WEIGHT
LOGS	TOPS	DEPTH				
40'				14"		
<p>All water flows encountered while drilling will be reported to the appropriate agencies.</p> <p>Green River @ 1,706'</p> <p>Top of Birds Nest Water @ 1,952'</p> <p>Mahogany @ 2,460'</p> <p>Preset f/ GL @ 2,660' MD</p> <p>Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.</p> <p>Mud logging program TBD</p> <p>Open hole logging program from TD - surf csg</p> <p>Wasatch @ 5,083'</p> <p>Mverde @ 8,363'</p> <p>MVU2 @ 9,319'</p> <p>MVL1 @ 9,723'</p> <p>TD @ 10,490'</p>				12-1/4"	9-5/8", 36#, J-55, LTC	Air mist
				7-7/8"	4-1/2" 11.6# HCP-110 & I-80 or equivalent LTC casing	Water/Fresh Water Mud 8.3-12.2 ppg





## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

#### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2660	36.00	J-55	LTC	0.81*	1.62	4.73
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	LTC	1.79	1.04	2.03
						10,690	8,650	279,000
		9600 to 10490	11.60	HCP-110	LTC	2.46	1.30	33.22

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.10

1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 4,228 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg)

0.62 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 6,535 psi**

#### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
Option 2	LEAD	2,160'	Prem cmt + 16% Gel + 10 pps gilsonite	240	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOC				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,580'	Premium Lite II + 0.25 pps celloflake +	440	40%	11.00	3.38
			5 pps gilsonite + 10% gel '+' 1% Retarder				
	TAIL	5,910'	50/50 Poz/G + 10% salt + 2% gel	1450	40%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

#### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

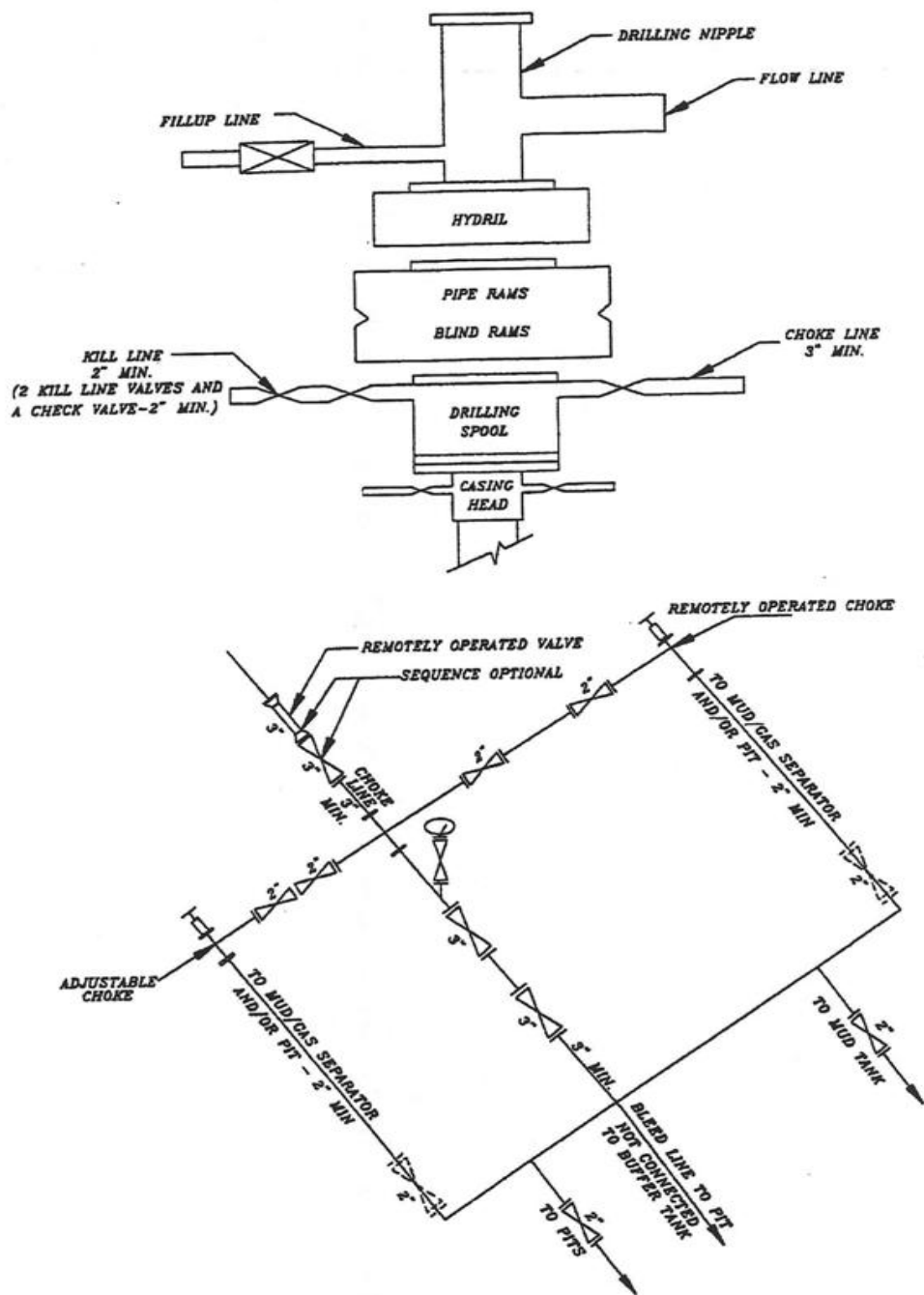
DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:



# EXHIBIT A NBU 920-23L

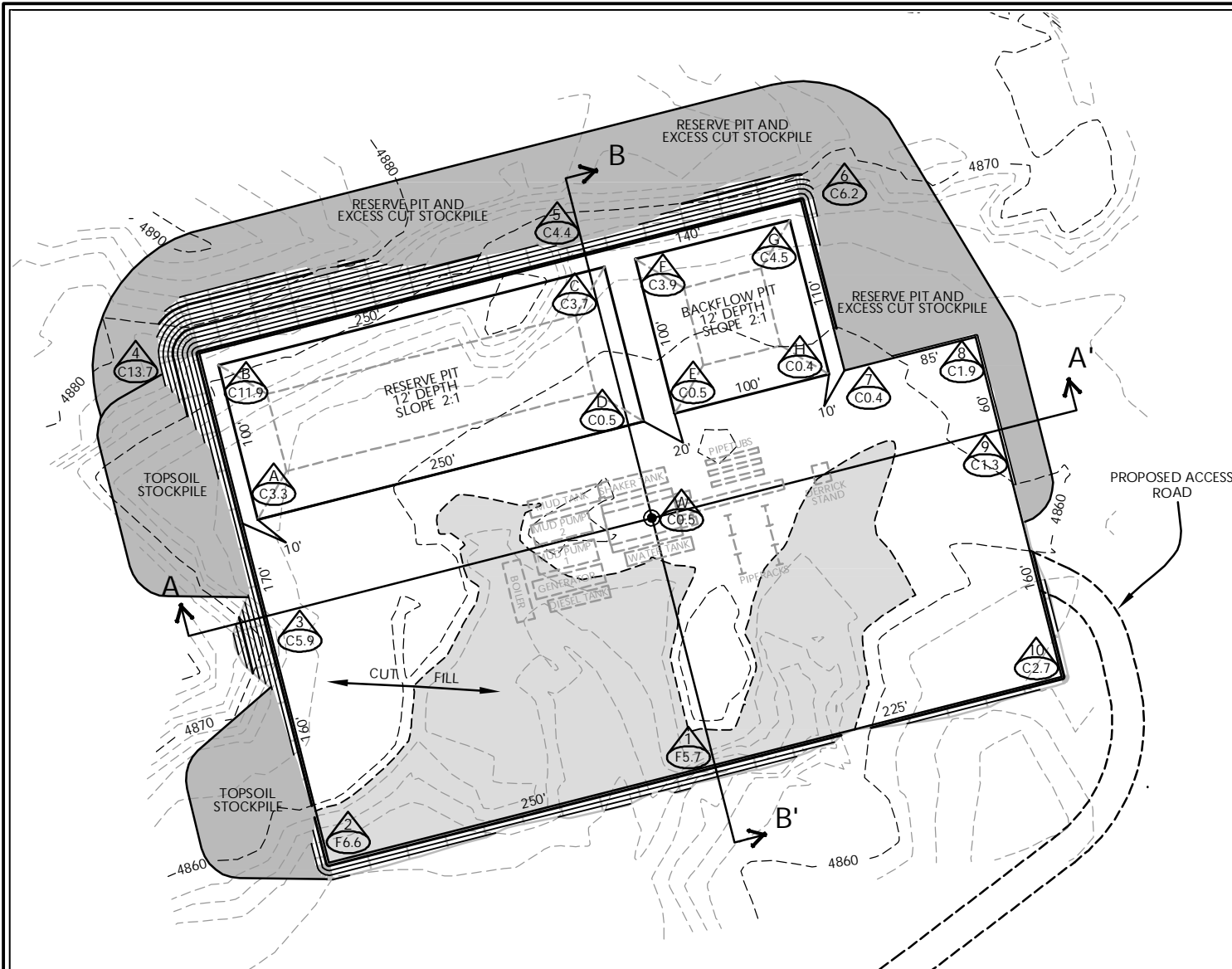


SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



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#### WELL PAD LEGEND

- WELL LOCATION
- - - EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)

#### WELL PAD NBU 920-23L QUANTITIES

EXISTING GRADE @ LOC. STAKE = 4859.5'  
FINISHED GRADE ELEVATION = 4859.0'  
CUT SLOPES = 1.5:1  
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 9,315 C.Y.  
TOTAL FILL FOR WELL PAD = 5,025 C.Y.  
TOPSOIL @ 6" DEPTH = 3,060 C.Y.  
EXCESS MATERIAL = 4,290 C.Y.  
TOTAL DISTURBANCE = 3.79 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00  
RESERVE PIT CAPACITY (2' OF FREEBOARD)  
+/- 28,730 BARRELS  
RESERVE PIT VOLUME  
+/- 7,720 CY  
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)  
+/- 9,490 BARRELS  
BACKFLOW PIT VOLUME  
+/- 2,660 CY

#### KERR-MCGEE OIL & GAS ONSHORE L.P.

1099 18th Street - Denver, Colorado 80202



CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

Scale: 1"=100'

Date: 2/18/09

SHEET NO:

REVISED:

BY  
DATE

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2 OF 9

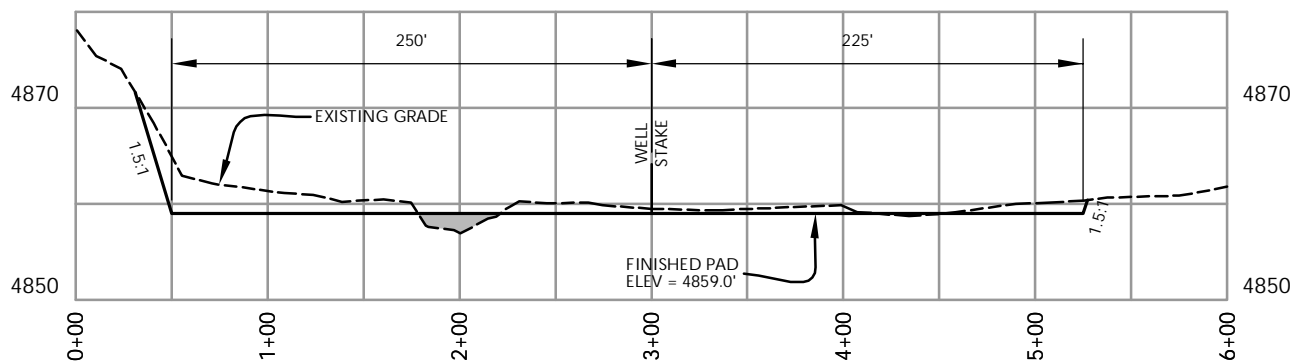


HORIZONTAL 0 50 100 1" = 100'  
2' CONTOURS

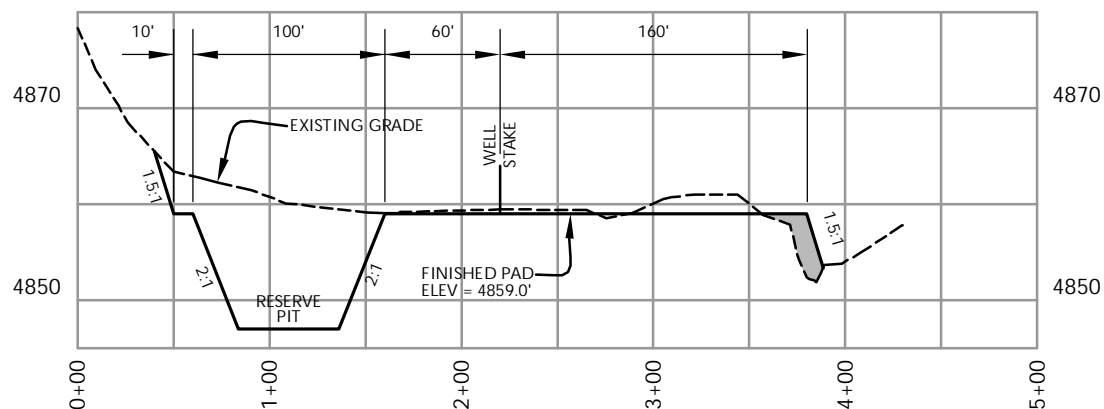
**Timberline** (435) 789-1365  
**Engineering & Land Surveying, Inc.**  
38 WEST 100 NORTH VERNAL, UTAH 84078

NBU 920-23L  
WELL PAD - LOCATION LAYOUT  
1491' FSL, 517' FWL  
NW1/4 SW1/4, SECTION 23, T9S, R20E,  
S.L.B.&M., UINTAH COUNTY, UTAH





**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS  
MAXIMUM RESERVE PIT DEPTH.

KERR-MCGEE OIL & GAS  
ONSHORE L.P.

1099 18th Street - Denver, Colorado 80202



CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

Scale: 1"=100'

Date: 2/18/09

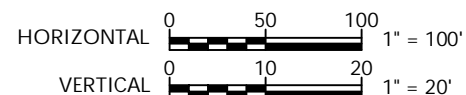
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3 OF 9

REVISED:

BY  
DATE



**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078

NBU 920-23L  
WELL PAD - CROSS SECTIONS  
1491' FSL, 517' FWL  
NW1/4 SW1/4, SECTION 23, T.9S., R.20E.  
S.L.B.&M., UINTAH COUNTY, UTAH



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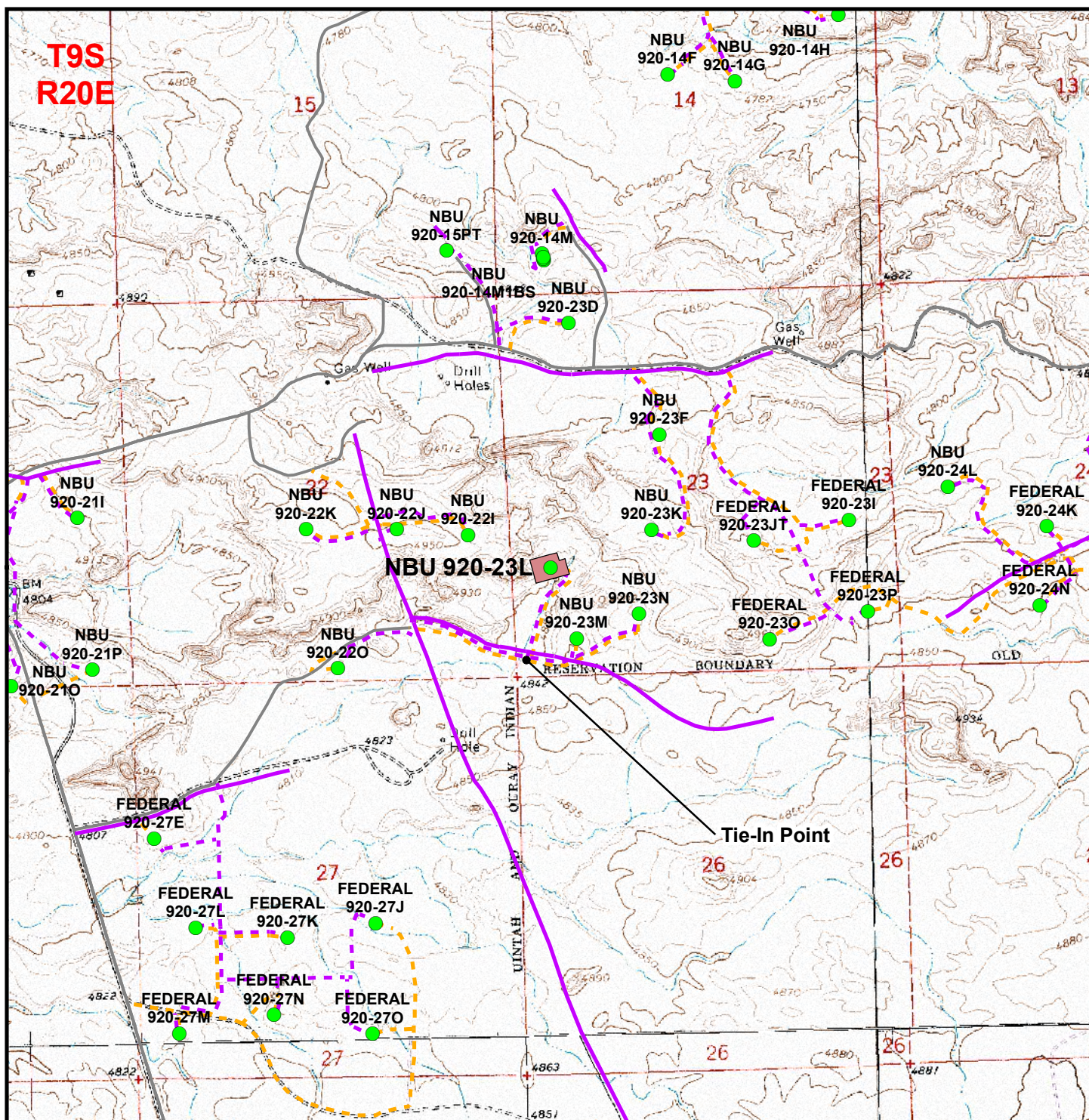
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## Legend

- Well - Proposed
- Well Pad
- - - Pipeline - Proposed
- - - Road - Proposed
- Pipeline - Existing
- Road - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad:  $\pm 1,350$ ft  
Proposed Pipeline Length Around Pad:  $\pm 660$ ft

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street, Denver, Colorado 80202

**NBU 920-23L**  
**Topo D**  
**1491' FSL, 517' FWL**  
**NW¼ SW¼, Section 23, T9S, R20E**  
**S.L.B.&M., Uintah County, Utah**

**609**  
**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1" = 2000ft	NAD83 USP Central	Sheet No:
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Revised:	Date:	



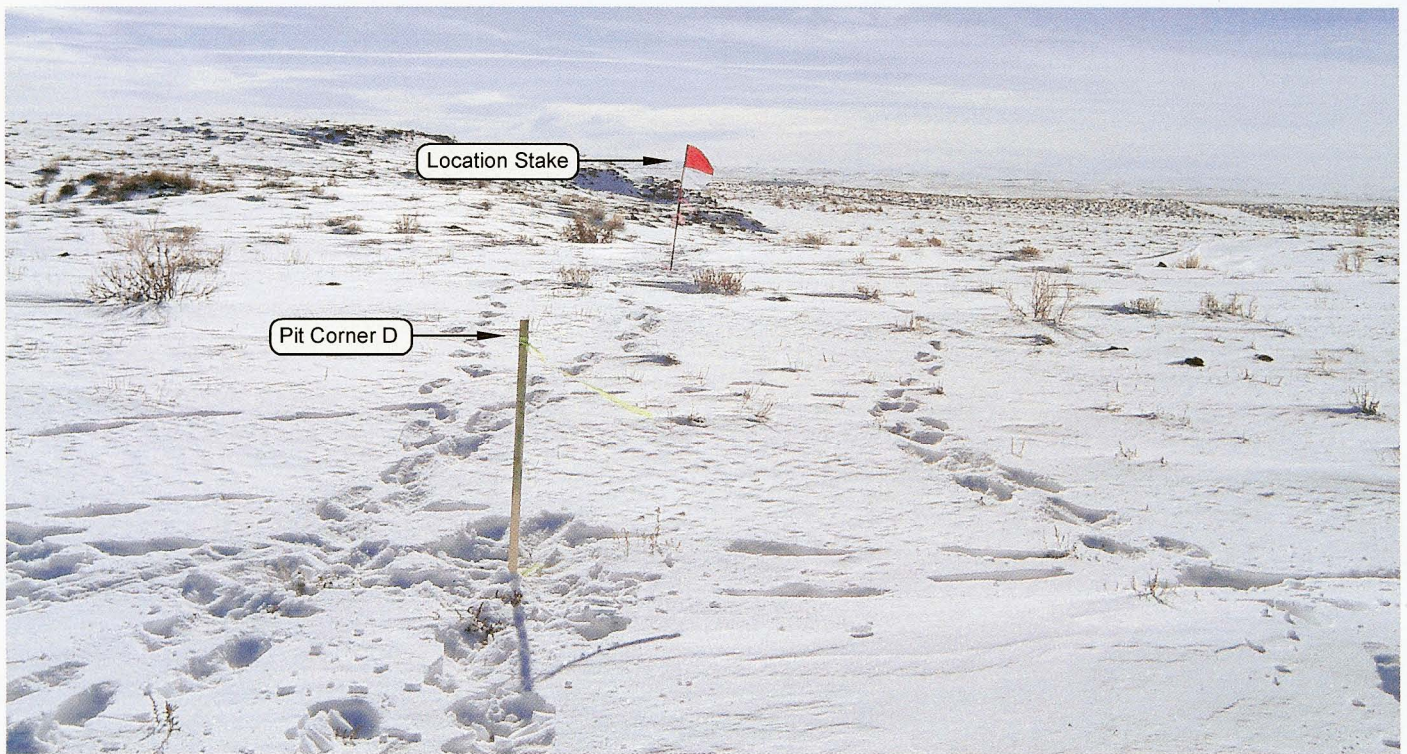


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHERLY

**Kerr-McGee**  
**Oil & Gas Onshore, LP**  
 1099 18th Street - Denver, Colorado 80202



CONSULTING, LLC  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

NBU 920-23L  
 1491' FSL, 517' FWL  
 NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  OF SECTION 23, T9S, R20E,  
 S.L.B.&M. UTAH COUNTY, UTAH.

**LOCATION PHOTOS**

TAKEN BY: B.J.S.

DRAWN BY: K.K.O.

DATE TAKEN: 01-06-09

DATE DRAWN: 01-28-09

REVISED:

**Timberline**

Engineering & Land Surveying, Inc.  
 209 NORTH 300 WEST VERNAL, UTAH 84078

(435) 789-1365

**SHEET**  
**4**  
**OF 9**



**Kerr-McGee Oil & Gas Onshore, LP**  
**NBU 920-23L**  
**Section 23, T9S, R20E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 6.2 MILES TO THE INTERSECTION OF A CLASS D COUNTY ROAD TO THE EAST. EXIT LEFT AND PROCEED IN AN EAST BY NORTHEAST DIRECTION ALONG THE CLASS D COUNTY ROAD APPROXIMATELY 0.4 MILES TO A SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.7 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN AN EASTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 3,200 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.6 MILES IN A SOUTHERLY DIRECTION.



**NBU 920-23L**

Surface: 1,491' FSL, 517' FWL (NW/4SW/4)

Sec. 23 T9S R20E

Uintah, Utah

Mineral Lease: UTU 0577A

Surface Owner: Ute Indian Tribe

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN  
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in the NW/4 SW/4 of Section 23 T9S R20E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on June 24, 2009. Present were:

- Verlyn Pindell and Dave Gordon – BLM;
- Kolby Kay and Mitch Batty – Timberline Surveying, Inc.
- Tony Kazeck, Jeff Samuels, Raleen White, David Liddell, and Hal Blanchard – Kerr-McGee
- Bucky Secakuku – BIA
- Nick Hall – Grasslands Consulting, Inc.
- Scott Carson – Smiling Lake Consulting
- Keith Montgomery – Montgomery Archaeological Consultants, Inc.

**1. Existing Roads:**

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**2. Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 0.27$  miles ( $\pm 1,445'$ ) of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

***Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.***



3. **Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and Proposed Facilities.*

*The following guidelines will apply if the well is productive.*

**Approximately  $\pm 2,010'$  of pipeline is proposed. Refer to Topo D for the existing pipeline.**

Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

5. **Location and Type of Water Supply:**

*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, Application number 53617. Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

6. **Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

7. **Methods of Handling Waste Materials:**

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E

Ace Oilfield in Sec. 2 T6S R20E

MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

8. **Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

9. **Well Site Layout:** (See Location Layout Diagram)

*See MDP for additional details on Well Site Layout.*

All pits will be fenced according to the following minimum standards:



- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

**10. Plans for Reclamation of the Surface:**

*See MDP for additional details on Plans for Reclamation of the Surface.*

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

**11. Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe  
PO Box 70  
Fort Duchesne, Utah 84026  
435-722-5141

The mineral ownership is listed below:

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
435-781-4400

**12. Other Information:**

*See MDP for additional details on Other Information.*



**13. Lessee's or Operators' Representative & Certification:**

Kathy Schneebeck Dulnoan  
Staff Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6007

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

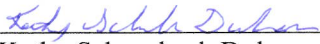
Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Kathy Schneebeck Dulnoan

July 15, 2009  
Date



CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 88 PROPOSED WELL LOCATIONS  
(T9S, R20E, SECS. 1, 14, 15, 20, 21, 22, 23, 27, 29, 32, 33, 34)  
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Ute Indian Tribe  
Uintah and Ouray Agency

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 08-318

March 4, 2009

United States Department of Interior (FLPMA)  
Permit No. 08-UT-60122



**IPC #09-78**

# **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Well Pads, Access Roads  
and Pipelines for "NBU #920-23L & 29P"  
(Sec. 23, 28 & 29, T 9 S, R 20 E)**

Big Pack Mtn NW & Ouray  
Topographic Quadrangle  
Uintah County, Utah

May 12, 2009

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078





# Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237

(303) 759-5377 Office (303) 759-5324 Fax

## **SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT**

**Operator:** Kerr-McGee Oil & Gas Onshore LP

**Wells:** NBU 920-23D, NBU 920-23F, NBU 920-23I, NBU 920-23J, NBU 920-23K, NBU 920-23L, NBU 920-23M, NBU 920-23N, NBU 920-23O, NBU 920-23P

**Pipelines:** Proposed pipelines leading to all proposed wells.

**Access Roads:** Access roads lead to all proposed wells.

**Location:** Section 23, Township 9 South, Range 20 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*) and nesting raptors

**Date:** 06/15/2009, 06/16/2009, and 06/18/2009

**Observer(s):** Grasslands Consulting, Inc. Biologists: Chris Gayer, Nick Hall, BJ Lukins, Jay Slocum, Dan Hamilton, Matt Kelahan, and Jonathan Sexauer. Technicians: Chad Johnson.

**Weather:** Partly cloudy, 80-85°F, 0-5 mph winds with no precipitation.



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

### IN REPLY REFER TO:

3160  
(UT-922)

July 17, 2009

### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

43-047-50555	NBU 920-23M	Sec 23 T09S R20E 0510 FSL 0821 FWL
43-047-50560	NBU 920-22N	Sec 22 T09S R20E 1206 FSL 2411 FWL
43-047-50562	NBU 920-20G3CS	Sec 20 T09S R20E 2011 FSL 0794 FEL
	BHL	Sec 20 T09S R20E 2580 FNL 2660 FEL
43-047-50563	NBU 920-23N	Sec 23 T09S R20E 0837 FSL 1702 FWL
43-047-50566	NBU 920-20H4CS	Sec 20 T09S R20E 1993 FSL 0786 FEL
	BHL	Sec 20 T09S R20E 2410 FNL 0650 FEL
43-047-50567	NBU 920-20I2AS	Sec 20 T09S R20E 2029 FSL 0803 FEL
	BHL	Sec 20 T09S R20E 2415 FSL 0925 FEL
43-047-50568	NBU 920-20L4CS	Sec 20 T09S R20E 0660 FSL 0849 FWL
	BHL	Sec 20 T09S R20E 1470 FSL 0675 FWL
43-047-50569	NBU 920-20M2AS	Sec 20 T09S R20E 0656 FSL 0829 FWL
	BHL	Sec 20 T09S R20E 1205 FSL 0650 FWL
43-047-50570	NBU 920-20M3AS	Sec 20 T09S R20E 0652 FSL 0810 FWL
	BHL	Sec 20 T09S R20E 0545 FSL 0660 FWL
43-047-50571	NBU 920-23F	Sec 23 T09S R20E 1988 FNL 2118 FWL
43-047-50572	NBU 920-23K	Sec 23 T09S R20E 1996 FSL 1939 FWL
43-047-50573	NBU 920-23L	Sec 23 T09S R20E 1491 FSL 0517 FWL
43-047-50574	NBU 920-23D	Sec 23 T09S R20E 0429 FNL 0967 FWL
43-047-50575	NBU 920-15I	Sec 15 T09S R20E 2071 FSL 0562 FEL
43-047-50576	NBU 920-14F	Sec 14 T09S R20E 2335 FNL 2412 FWL
43-047-50577	NBU 920-14C	Sec 14 T09S R20E 0477 FNL 1890 FWL
43-047-50578	NBU 920-14B	Sec 14 T09S R20E 0981 FNL 2071 FEL
43-047-50579	NBU 920-14A	Sec 14 T09S R20E 0589 FNL 0593 FEL



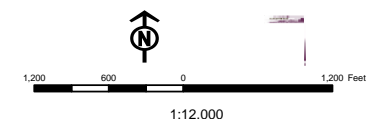
This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File – Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:7-17-09







# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 7/16/2009

**API NO. ASSIGNED:** 43047505730000

**WELL NAME:** NBU 920-23L

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NWSW 23 090S 200E

**Permit Tech Review:** ☒

**SURFACE:** 1491 FSL 0517 FWL

**Engineering Review:** ☒

**BOTTOM:** 1491 FSL 0517 FWL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 40.01765

**LONGITUDE:** -109.64067

**UTM SURF EASTINGS:** 616007.00

**NORTHINGS:** 4430392.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 0577A

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 2 - Indian

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - WYB000291

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☒ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

☐ **R649-2-3.**

**Unit:** NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

**Board Cause No:** Cause 173-14

**Effective Date:** 12/2/1999

**Siting:** 460' fr u bdry & uncomm. tract

☐ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**  
3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
17 - Oil Shale 190-5(b) - dmason





JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 920-23L  
**API Well Number:** 43047505730000  
**Lease Number:** UTU 0577A  
**Surface Owner:** INDIAN  
**Approval Date:** 8/11/2009

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Cause No. 173-14 commingling the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during



drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

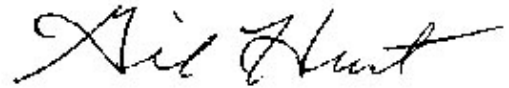
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, flowing script.

Gil Hunt  
Associate Director, Oil & Gas



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-23L
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1491 FSL 0517 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 23 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505730000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

**11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

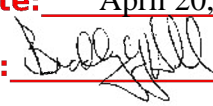
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/15/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER:

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**  

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests to change the **well name** for this location FROM: NBU 920-23L TO: NBU 920-23L3DS due to the well changing to a **directional well**. The well pad for this location will also have three additional wells added to it. Please see the attached revised plats, maps and drilling information for additional information. Please contact the undersigned with any questions and/or comments. Thank you.

**Approved by the**  
**Utah Division of**  
**Oil, Gas and Mining**

**Date:** April 20, 2010

**By:** 

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/7/2010	







N89°57'W - 39.95 (G.L.O.)  
N89°56'34"W - 2637.34' (Meas.)

S89°45'W - 39.92 (G.L.O.)



▲ = Section Corners Located

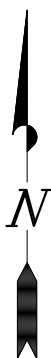
1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
3. The Bottom of hole bears N88°42'33"W 172.63' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri-Sta "Two Water" located in the NW  $\frac{1}{4}$  of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

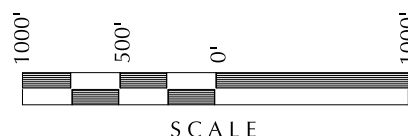
**WELL PAD - NBU 920-23L**

**NBU 920-23L3DS**  
**WELL PLAT**

**1491' FSL, 335' FWL (Bottom Hole)**  
**NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  OF SECTION 23, T9S, R20E,**  
**S.L.B.&M., UTAH COUNTY, UTAH.**



**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182



## SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED  
FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR  
UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE  
AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 362251  
STATE OF UTAH

## TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 12-03-09	SURVEYED BY: M.S.B.	SHEET NO: <b>4</b> 4 OF 13
DATE DRAWN: 12-07-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	

**RECEIVED** April 07, 2010



**NBU 920-23L3DS (FKA NBU 920-23L)**

Pad: NBU 920-23L

Surface: 1,489' FSL 507' FWL (NW/4SW/4)

BHL: 1,491' FSL 335' FWL (NW/4SW/4)

Sec. 23 T9S R20E

Uintah, Utah

Mineral Lease: UTU 0577A

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,704'	
Birds Nest	1,940'	Water
Mahogany	2,327'	Water
Wasatch	5,077'	Gas
Mesaverde	8,333'	Gas
MVU2	9,385'	Gas
MVL1	9,842'	Gas
TVD	10,589'	
TD	10,595'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*



**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,589' TVD, approximately equals 6,707 psi (calculated at 0.63 psi/foot).

Maximum anticipated surface pressure equals approximately 4,378 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

**Background**

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found*



competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### **Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### **Variance for Special Drilling Operation (surface equipment placement) Requirements**

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see



attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

***Variance for FIT Requirements***

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

***Conclusion***

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

**10. Other Information:**

*Please refer to the attached Drilling Program.*



**KERR-McGEE OIL & GAS ONSHORE LP**  
**DRILLING PROGRAM**

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP				DATE	April 7, 2010	
WELL NAME	NBU 920-23L3DS				TD	10,589'	10,595' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,859'
SURFACE LOCATION	NW/4 SW/4	1,489' FSL	507' FWL	Sec 23	T 9S	R 20E	
	Latitude:	40.017653	Longitude:	-109.641310			NAD 83
BTM HOLE LOCATION	NW/4 SW/4	1,491' FSL	335' FWL	Sec 23	T 9S	R 20E	
	Latitude:	40.017664	Longitude:	-109.641926			NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Tribe (Surface), UDOGM Tri-County Health Dept.						

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			11"	8-5/8", 28#, IJ-55, LTC	Air mist
All water flows encountered while drilling will be reported to the appropriate agencies.					
	Green River @	1,704'			
	Top of Birds Nest @	1,940'			
	Mahogany @	2,327'			
	Preset f/ GL @	2,480' MD			
Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.					
	Wasatch @	5,077'			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# I-80 & HCP-110 or equivalent BTC/LTC csg	Water / Fresh Water Mud 8.3-12.4 ppg
	Mverde @	8,333' TVD			
	MVU2 @	9,385' TVD			
	MVU1 @	9,842' TVD			
	Max anticipated Mud required	10,589' TVD			
	TD @	10,595' MD			





# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,480'	28.00	IJ-55	LTC	0.75	1.62	4.96
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9,656'	11.60	I-80	BTC	1.73	1.08	2.79
	4-1/2"	9,656' to 10,595'	11.60	HCP-110	LTC	10,690	8,650	279,000
		939' of HCP-110 pipe				51.75	1.27	31.60

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.17

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.4 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 4,378 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.4 ppg)

0.63 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 6,707 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE Option 1	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE Option 2	LEAD	1,980'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	180	35%	11.00	3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,575'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	370	40%	11.00	3.38
	TAIL	6,020'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,470	40%	14.30	1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

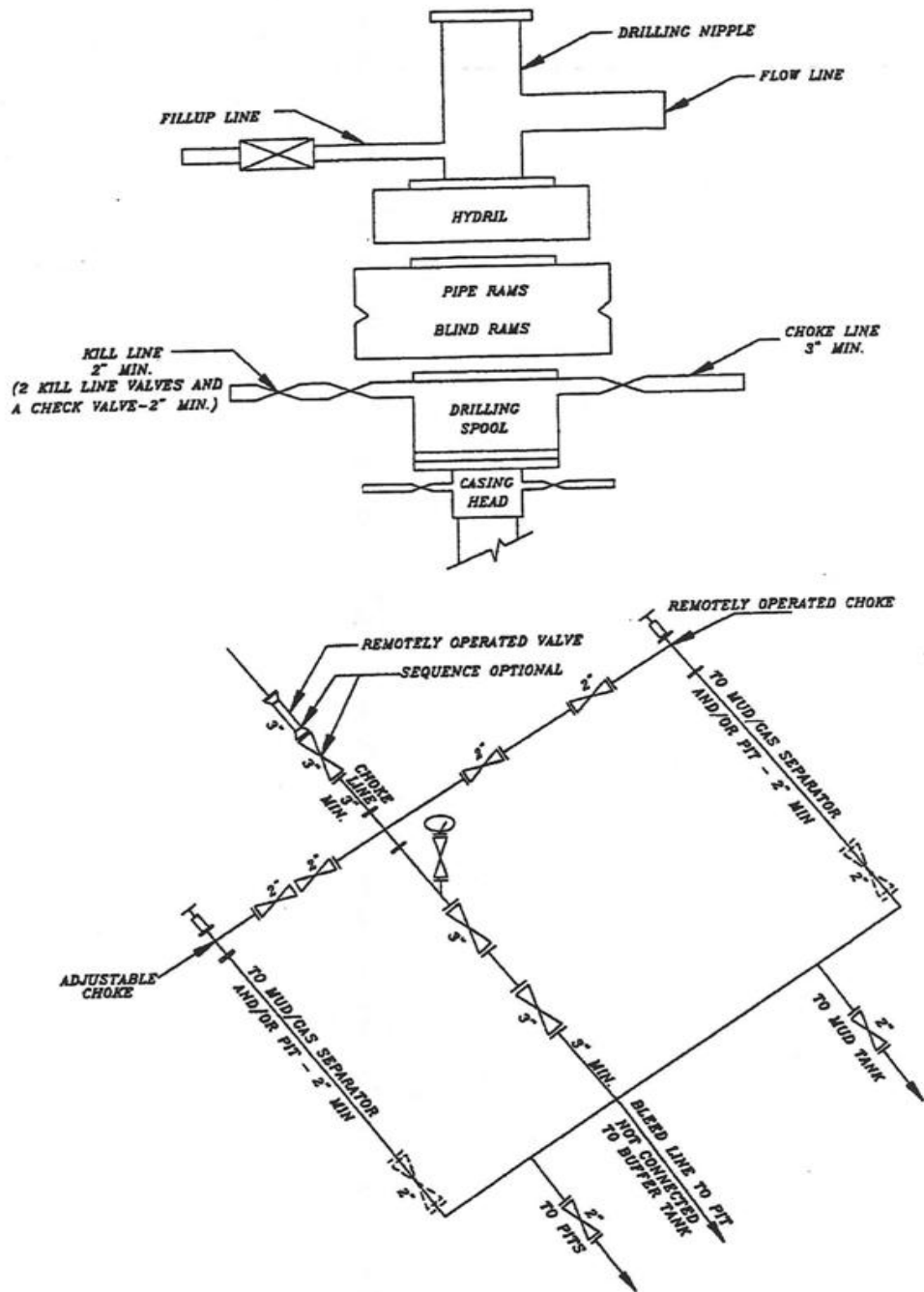
DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:



EXHIBIT A  
NBU 920-23L3DS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



**NBU 920-23L1BS**

Surface: 1,494' FSL 527' FWL (NW/4SW/4)  
BHL: 2,320' FSL 670' FWL (NW/4SW/4)

**NBU 920-23L2DS**

Surface: 1,491' FSL 517' FWL (NW/4SW/4)  
BHL: 2,155' FSL 335' FWL (NW/4SW/4)

**NBU 920-23L3DS (FKA NBU 920-23L)**

API Number: 43-047-50573  
S Surface: 1,489' FSL 507' FWL (NW/4SW/4)  
BHL: 1,491' FSL 335' FWL (NW/4SW/4)

**NBU 920-23L4BS**

Surface: 1,497' FSL 537' FWL (NW/4SW/4)  
BHL: 1,660' FSL 670' FWL (NW/4SW/4)

Pad: NBU 920-23L  
Sec. 23 T9S R20E

Uintah, Utah  
Operator: Kerr-McGee Oil & Gas Onshore LP  
Mineral Lease: UTU 0577A  
Surface Owner: Ute Indian Tribe

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN  
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

An Application for Permit to Drill (APD) for the NBU 920-23L3DS well was approved by the BLM on October 16, 2009 and by UDOGM on August 12, 2009. At the time the APD was submitted and approved, the well was known as the NBU 920-23L. Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) is requesting to change this vertical well to a directional well and add three additional wells to the well pad. Kerr-McGee will file for this request through a Sundry Notice and a Modification Application.

This APD is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in NW/4 SW/4 of Section 23 T9S R20E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.



An on-site meeting was held on June 24, 2009. Present were:

- Verlyn Pindell and Dave Gordon – BLM;
- Kolby Kay and Mitch Batty – Timberline Surveying, Inc.
- Tony Kazeck, Jeff Samuels, Raleen White, David Liddell, and Hal Blanchard – Kerr-McGee
- Bucky Secakuku – BIA
- Nick Hall – Grasslands Consulting, Inc.
- Scott Carson – Smiling Lake Consulting
- Keith Montgomery – Montgomery Archaeological Consultants, Inc.

**Directional Drilling:**

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

**1. Existing Roads:**

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**2. Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 1,445'$  ( $\pm 0.27$  miles) of new access road is proposed with concurrent access with the NBU 920-23N well pad. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

*Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.*

**3. Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

**4. Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and Proposed Facilities.*

*The following guidelines will apply if the well is productive.*

Approximately 660' ( $\pm 0.1$  miles) of buried pipeline is proposed around the well pad. Another approximately  $\pm 1,350'$  ( $\pm 0.3$  miles) of buried pipeline is proposed from the tie in point to the edge of the pad with concurrent pipeline with the NBU 920-23N well pad. Please refer to Topo D for the existing pipeline. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place



At the onsite, Kerr-McGee agreed to the following:

- Paint equipment Shadow Grey.
- Archeological monitoring during construction.

**5. Location and Type of Water Supply:**

*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from the following sources:

49-2243	Target Trucking Inc.	Green River- Various points
49-2300	R.N. Industries	White River- Various points
49-2298	RNI Trucking	White River- Various points
49-2231	Nile Chapman	Green River- Various points
49-2299	R.N. Industries	Green River- Various points
49-2306	R.N. Industries	White River- Various points

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

**7. Methods of Handling Waste Materials:**

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

**8. Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

**9. Well Site Layout: (See Location Layout Diagram)**

*See MDP for additional details on Well Site Layout.*

All pits will be fenced according to the following minimum standards:



- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

**10. Plans for Reclamation of the Surface:**

*See MDP for additional details on Plans for Reclamation of the Surface.*

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

**11. Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe  
PO Box 70  
Fort Duchesne, Utah 84026  
435-722-5141

The mineral ownership is listed below:

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
435-781-4400

**12. Other Information:**

*See MDP for additional details on Other Information.*



**13. Lessee's or Operators' Representative & Certification:**

Danielle Piernot  
Regulatory Analyst I  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6156

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Danielle Piernot

March 30, 2010  
Date





# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)**

**NBU 920-23L PAD**

**NBU 920-23L3DS**

**NBU 920-23L3DS**

**Plan: PLAN #1 2-3-10 RHS**

## **Standard Planning Report**

**03 February, 2010**

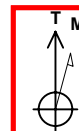




Project: UINTAH COUNTY, UTAH (nad 27)  
 Site: NBU 920-23L PAD  
 Well: NBU 920-23L3DS  
 Wellbore: NBU 920-23L3DS  
 Section: SECTION 23 T9S R20E  
 SHL: 1489 FSL 507 FWL  
 Design: PLAN #1 2-3-10 RHS  
 Latitude: 40° 1' 3.680 N  
 Longitude: 109° 38' 26.225 W  
 GL: 4859.00  
 KB: WELL @ 4873.00ft (Original Well Elev)



## Weatherford®



Azimuths to True North  
 Magnetic North: 11.34°

Magnetic Field  
 Strength: 52466.6mT  
 Dip Angle: 65.91°  
 Date: 2/3/2010  
 Model: BGGM2009

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1704.00	1707.61	GREEN RIVER
5077.00	5083.24	WASATCH
9385.00	9391.24	MESAVERDE

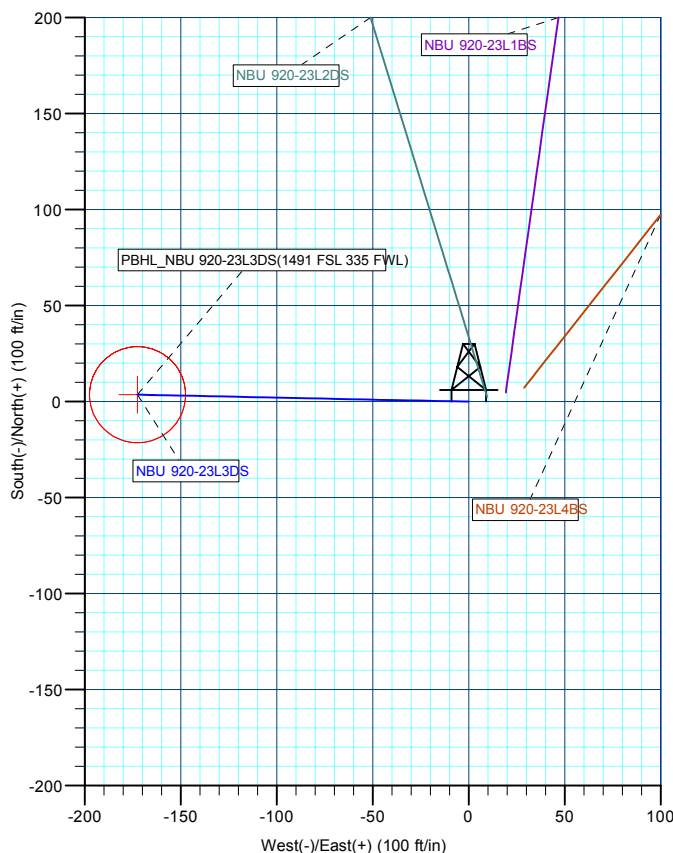
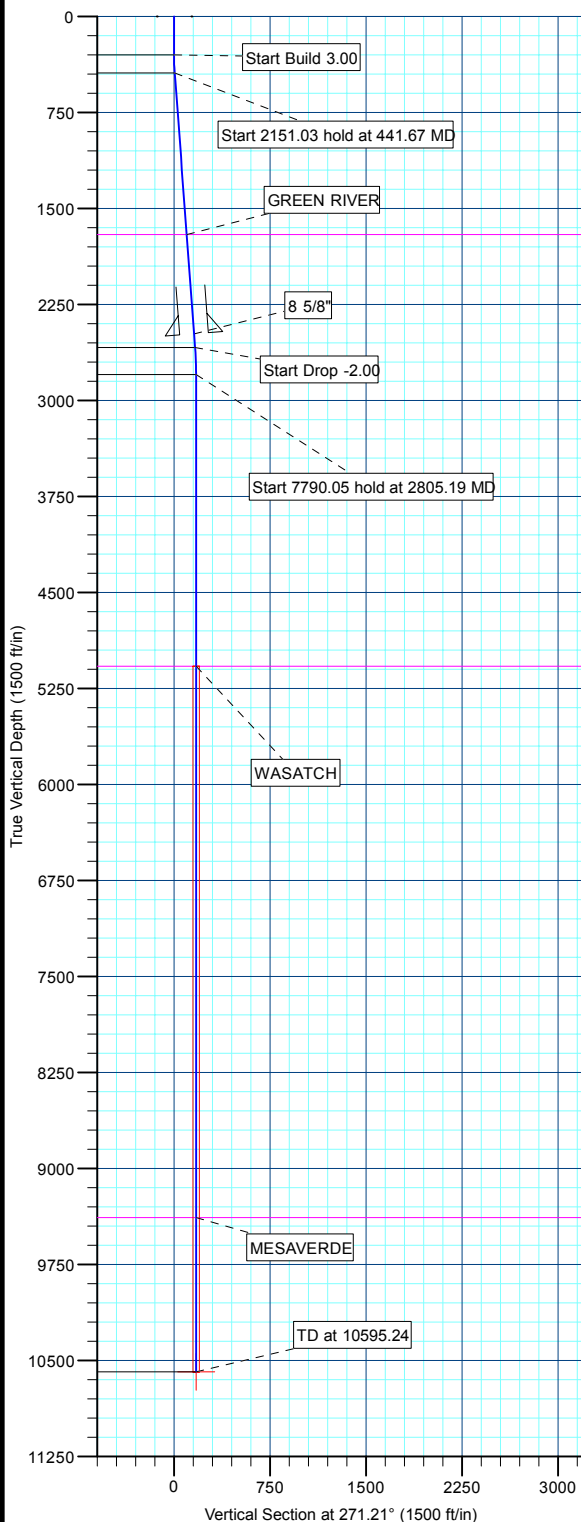
CASING DETAILS			
TVD	MD	Name	Size
2480.00	2485.75	8 5/8"	8.62

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
441.67	4.25	271.21	441.54	0.11	-5.25	3.00	271.21	5.25	Start 2151.03 hold at 441.67 MD
2592.69	4.25	271.21	2586.65	3.48	-164.62	0.00	0.00	164.66	Start Drop -2.00
2805.19	0.00	0.00	2798.95	3.64	-172.50	2.00	180.00	172.54	Start 7790.05 hold at 2805.19 MD
10595.24	0.00	0.00	10589.00	3.64	-172.50	0.00	0.00	172.54	TD at 10595.24

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	10589.00	3.64	-172.50	40° 1' 3.716 N	109° 38' 28.442 W	Circle (Radius: 25.00)

WELL DETAILS: NBU 920-23L3DS						
+N/-S	+E/-W	Northing	Ground Level: Easting	4859.00 Latitude	Longitude	Slot
0.00	0.00	14535389.21	2021030.89	40° 1' 3.680 N	109° 38' 26.225 W	

LEGEND	
—	NBU 920-23L1BS, NBU 920-23L1BS, PLAN #1 2-3-10 RHS V0
—	NBU 920-23L2DS, NBU 920-23L2DS, PLAN #1 2-3-10 RHS V0
—	NBU 920-23L4BS, NBU 920-23L4BS, PLAN #1 2-3-10 RHS V0
—	PLAN #1 2-3-10 RHS



Plan: PLAN #1 2-3-10 RHS (NBU 920-23L3DS/NBU 920-23L3DS)

RECEIVED April 07, 2010  
 Created By: Robert H. Scott

Date: 15:05, February 03 2010



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site:</b>	NBU 920-23L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NBU 920-23L3DS		
<b>Design:</b>	PLAN #1 2-3-10 RHS		

<b>Project</b>	UINTAH COUNTY, UTAH (nad 27),		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 920-23L PAD, SECTION 23 T9S R20E			
<b>Site Position:</b>		<b>Northing:</b>	14,535,389.21 ft	<b>Latitude:</b> 40° 1' 3.680 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,021,030.89 ft	<b>Longitude:</b> 109° 38' 26.225 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b> 0.87 °

<b>Well</b>	NBU 920-23L3DS			
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,535,389.21 ft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,021,030.89 ft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	4,859.00 ft

<b>Wellbore</b>	NBU 920-23L3DS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2009	2/3/2010	11.34	65.91	52,467

<b>Design</b>	PLAN #1 2-3-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	271.21

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
441.67	4.25	271.21	441.54	0.11	-5.25	3.00	3.00	0.00	271.21	
2,592.69	4.25	271.21	2,586.65	3.48	-164.62	0.00	0.00	0.00	0.00	
2,805.19	0.00	0.00	2,798.95	3.64	-172.50	2.00	-2.00	0.00	180.00	
10,595.24	0.00	0.00	10,589.00	3.64	-172.50	0.00	0.00	0.00	0.00	PBHL_NBU 920-23



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site:</b>	NBU 920-23L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NBU 920-23L3DS		
<b>Design:</b>	PLAN #1 2-3-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>Start Build 3.00</b>									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	3.00	271.21	399.95	0.06	-2.62	2.62	3.00	3.00	0.00
<b>Start 2151.03 hold at 441.67 MD</b>									
441.67	4.25	271.21	441.54	0.11	-5.25	5.25	3.00	3.00	0.00
500.00	4.25	271.21	499.71	0.20	-9.57	9.57	0.00	0.00	0.00
600.00	4.25	271.21	599.43	0.36	-16.98	16.99	0.00	0.00	0.00
700.00	4.25	271.21	699.16	0.52	-24.39	24.40	0.00	0.00	0.00
800.00	4.25	271.21	798.88	0.67	-31.80	31.81	0.00	0.00	0.00
900.00	4.25	271.21	898.61	0.83	-39.21	39.22	0.00	0.00	0.00
1,000.00	4.25	271.21	998.33	0.98	-46.62	46.63	0.00	0.00	0.00
1,100.00	4.25	271.21	1,098.06	1.14	-54.03	54.04	0.00	0.00	0.00
1,200.00	4.25	271.21	1,197.78	1.30	-61.44	61.45	0.00	0.00	0.00
1,300.00	4.25	271.21	1,297.51	1.45	-68.85	68.86	0.00	0.00	0.00
1,400.00	4.25	271.21	1,397.23	1.61	-76.26	76.27	0.00	0.00	0.00
1,500.00	4.25	271.21	1,496.96	1.77	-83.66	83.68	0.00	0.00	0.00
1,600.00	4.25	271.21	1,596.68	1.92	-91.07	91.09	0.00	0.00	0.00
1,700.00	4.25	271.21	1,696.41	2.08	-98.48	98.50	0.00	0.00	0.00
<b>GREEN RIVER</b>									
1,707.61	4.25	271.21	1,704.00	2.09	-99.05	99.07	0.00	0.00	0.00
1,800.00	4.25	271.21	1,796.13	2.24	-105.89	105.92	0.00	0.00	0.00
1,900.00	4.25	271.21	1,895.86	2.39	-113.30	113.33	0.00	0.00	0.00
2,000.00	4.25	271.21	1,995.58	2.55	-120.71	120.74	0.00	0.00	0.00
2,100.00	4.25	271.21	2,095.31	2.71	-128.12	128.15	0.00	0.00	0.00
2,200.00	4.25	271.21	2,195.04	2.86	-135.53	135.56	0.00	0.00	0.00
2,300.00	4.25	271.21	2,294.76	3.02	-142.94	142.97	0.00	0.00	0.00
2,400.00	4.25	271.21	2,394.49	3.17	-150.35	150.38	0.00	0.00	0.00
<b>8 5/8"</b>									
2,485.75	4.25	271.21	2,480.00	3.31	-156.70	156.74	0.00	0.00	0.00
2,500.00	4.25	271.21	2,494.21	3.33	-157.76	157.79	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
2,592.69	4.25	271.21	2,586.65	3.48	-164.62	164.66	0.00	0.00	0.00
2,600.00	4.10	271.21	2,593.94	3.49	-165.16	165.19	2.00	-2.00	0.00
2,700.00	2.10	271.21	2,693.78	3.60	-170.57	170.61	2.00	-2.00	0.00
2,800.00	0.10	271.21	2,793.76	3.64	-172.50	172.53	2.00	-2.00	0.00
<b>Start 7790.05 hold at 2805.19 MD</b>									
2,805.19	0.00	0.00	2,798.95	3.64	-172.50	172.54	2.00	-2.00	0.00
2,900.00	0.00	0.00	2,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,000.00	0.00	0.00	2,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,100.00	0.00	0.00	3,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,200.00	0.00	0.00	3,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,300.00	0.00	0.00	3,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,400.00	0.00	0.00	3,393.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,500.00	0.00	0.00	3,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,600.00	0.00	0.00	3,593.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,700.00	0.00	0.00	3,693.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,800.00	0.00	0.00	3,793.76	3.64	-172.50	172.54	0.00	0.00	0.00
3,900.00	0.00	0.00	3,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,000.00	0.00	0.00	3,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,100.00	0.00	0.00	4,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,200.00	0.00	0.00	4,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,300.00	0.00	0.00	4,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,400.00	0.00	0.00	4,393.76	3.64	-172.50	172.54	0.00	0.00	0.00



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site:</b>	NBU 920-23L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NBU 920-23L3DS		
<b>Design:</b>	PLAN #1 2-3-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,500.00	0.00	0.00	4,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,600.00	0.00	0.00	4,593.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,700.00	0.00	0.00	4,693.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,800.00	0.00	0.00	4,793.76	3.64	-172.50	172.54	0.00	0.00	0.00
4,900.00	0.00	0.00	4,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,000.00	0.00	0.00	4,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
<b>WASATCH</b>									
5,083.24	0.00	0.00	5,077.00	3.64	-172.50	172.54	0.00	0.00	0.00
5,100.00	0.00	0.00	5,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,200.00	0.00	0.00	5,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,300.00	0.00	0.00	5,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,400.00	0.00	0.00	5,393.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,500.00	0.00	0.00	5,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,600.00	0.00	0.00	5,593.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,700.00	0.00	0.00	5,693.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,800.00	0.00	0.00	5,793.76	3.64	-172.50	172.54	0.00	0.00	0.00
5,900.00	0.00	0.00	5,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,000.00	0.00	0.00	5,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,100.00	0.00	0.00	6,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,200.00	0.00	0.00	6,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,300.00	0.00	0.00	6,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,400.00	0.00	0.00	6,393.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,500.00	0.00	0.00	6,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,600.00	0.00	0.00	6,593.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,700.00	0.00	0.00	6,693.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,800.00	0.00	0.00	6,793.76	3.64	-172.50	172.54	0.00	0.00	0.00
6,900.00	0.00	0.00	6,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,000.00	0.00	0.00	6,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,100.00	0.00	0.00	7,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,200.00	0.00	0.00	7,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,300.00	0.00	0.00	7,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,400.00	0.00	0.00	7,393.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,500.00	0.00	0.00	7,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,600.00	0.00	0.00	7,593.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,700.00	0.00	0.00	7,693.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,800.00	0.00	0.00	7,793.76	3.64	-172.50	172.54	0.00	0.00	0.00
7,900.00	0.00	0.00	7,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,000.00	0.00	0.00	7,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,100.00	0.00	0.00	8,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,200.00	0.00	0.00	8,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,300.00	0.00	0.00	8,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,400.00	0.00	0.00	8,393.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,500.00	0.00	0.00	8,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,600.00	0.00	0.00	8,593.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,700.00	0.00	0.00	8,693.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,800.00	0.00	0.00	8,793.76	3.64	-172.50	172.54	0.00	0.00	0.00
8,900.00	0.00	0.00	8,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,000.00	0.00	0.00	8,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,100.00	0.00	0.00	9,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,200.00	0.00	0.00	9,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,300.00	0.00	0.00	9,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
<b>MESAVERDE</b>									
9,391.24	0.00	0.00	9,385.00	3.64	-172.50	172.54	0.00	0.00	0.00
9,400.00	0.00	0.00	9,393.76	3.64	-172.50	172.54	0.00	0.00	0.00



<b>Database:</b>	EDM 2003.21 Single User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site:</b>	NBU 920-23L PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	NBU 920-23L3DS		
<b>Design:</b>	PLAN #1 2-3-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,500.00	0.00	0.00	9,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,600.00	0.00	0.00	9,593.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,700.00	0.00	0.00	9,693.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,800.00	0.00	0.00	9,793.76	3.64	-172.50	172.54	0.00	0.00	0.00
9,900.00	0.00	0.00	9,893.76	3.64	-172.50	172.54	0.00	0.00	0.00
10,000.00	0.00	0.00	9,993.76	3.64	-172.50	172.54	0.00	0.00	0.00
10,100.00	0.00	0.00	10,093.76	3.64	-172.50	172.54	0.00	0.00	0.00
10,200.00	0.00	0.00	10,193.76	3.64	-172.50	172.54	0.00	0.00	0.00
10,300.00	0.00	0.00	10,293.76	3.64	-172.50	172.54	0.00	0.00	0.00
10,400.00	0.00	0.00	10,393.76	3.64	-172.50	172.54	0.00	0.00	0.00
10,500.00	0.00	0.00	10,493.76	3.64	-172.50	172.54	0.00	0.00	0.00
<b>TD at 10595.24 - PBHL_NBU 920-23L3DS(1491 FSL 335 FWL)</b>									
10,595.24	0.00	0.00	10,589.00	3.64	-172.50	172.54	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_NBU 920-23L3	0.00	0.00	10,589.00	3.64	-172.50	14,535,390.22	2,020,858.36	40° 1' 3.716 N	109° 38' 28.442 W
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,485.75	2,480.00	8 5/8"	8.62	12.25	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,707.61	1,704.00	GREEN RIVER				
5,083.24	5,077.00	WASATCH				
9,391.24	9,385.00	MESAVERDE				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 3.00
441.67	441.54	0.11	-5.25	Start 2151.03 hold at 441.67 MD
2,592.69	2,586.65	3.48	-164.62	Start Drop -2.00
2,805.19	2,798.95	3.64	-172.50	Start 7790.05 hold at 2805.19 MD
10,595.24	10,589.00	3.64	-172.50	TD at 10595.24



# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)  
NBU 920-23L PAD  
NBU 920-23L3DS**

**NBU 920-23L3DS  
PLAN #1 2-3-10 RHS**

## **Anticollision Report**

**04 February, 2010**





<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN #1 2-3-10 RHS		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	0.00 to 20,000.00ft	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.00ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 2/3/2010			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	10,595.24	PLAN #1 2-3-10 RHS (NBU 920-23L3DS)	MWD	MWD - Standard

<b>Summary</b>						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
NBU 920-23L PAD						
NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10	300.00	300.00	19.89	18.80	18.212	CC, ES
NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10	400.00	399.65	23.09	21.54	14.969	SF
NBU 920-23L2DS - NBU 920-23L2DS - PLAN #1 2-3-10	300.00	300.00	9.86	8.76	9.023	CC, ES
NBU 920-23L2DS - NBU 920-23L2DS - PLAN #1 2-3-10	400.00	399.95	12.35	10.81	8.019	SF
NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10	300.00	300.00	29.75	28.66	27.234	CC, ES
NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10	10,595.24	10,591.75	368.71	322.11	7.912	SF

<b>Offset Design</b>	NBU 920-23L PAD - NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10 RHS											<b>Offset Site Error:</b>	0.00 ft
<b>Survey Program:</b>	0-MWD											<b>Offset Well Error:</b>	0.00 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	76.23	4.73	19.32	19.89				
100.00	100.00	100.00	100.00	0.10	0.10	76.23	4.73	19.32	19.89	19.70	0.19	102.918	
200.00	200.00	200.00	200.00	0.32	0.32	76.23	4.73	19.32	19.89	19.25	0.64	30.947	
300.00	300.00	300.00	300.00	0.55	0.55	76.23	4.73	19.32	19.89	18.80	1.09	18.212	CC, ES
400.00	399.95	399.65	399.63	0.76	0.77	162.67	6.45	19.56	23.09	21.54	1.54	14.969	SF
441.67	441.54	441.03	440.97	0.86	0.87	160.88	8.17	19.80	26.33	24.59	1.73	15.182	
500.00	499.71	499.06	498.92	0.99	1.00	158.50	11.17	20.22	31.76	29.77	1.99	15.954	
600.00	599.43	598.60	598.33	1.23	1.23	155.86	16.32	20.95	41.17	38.73	2.44	16.897	
700.00	699.16	698.14	697.74	1.48	1.46	154.20	21.48	21.67	50.63	47.74	2.89	17.514	
800.00	798.88	797.69	797.14	1.73	1.70	153.07	26.64	22.39	60.12	56.77	3.35	17.945	
900.00	898.61	897.23	896.55	1.99	1.94	152.24	31.80	23.12	69.63	65.82	3.81	18.259	
1,000.00	998.33	996.77	995.95	2.25	2.18	151.61	36.96	23.84	79.15	74.87	4.28	18.498	
1,100.00	1,098.06	1,096.32	1,095.36	2.51	2.41	151.12	42.12	24.56	88.67	83.93	4.75	18.686	
1,200.00	1,197.78	1,195.86	1,194.77	2.77	2.65	150.73	47.28	25.29	98.21	92.99	5.21	18.836	
1,300.00	1,297.51	1,295.40	1,294.17	3.03	2.89	150.40	52.44	26.01	107.74	102.06	5.68	18.960	
1,400.00	1,397.23	1,394.94	1,393.58	3.29	3.13	150.13	57.60	26.73	117.28	111.13	6.15	19.063	
1,500.00	1,496.96	1,494.49	1,492.99	3.56	3.37	149.89	62.76	27.46	126.82	120.20	6.62	19.150	
1,600.00	1,596.68	1,594.03	1,592.39	3.82	3.61	149.69	67.92	28.18	136.36	129.27	7.09	19.224	
1,700.00	1,696.41	1,693.57	1,691.80	4.08	3.85	149.52	73.08	28.90	145.91	138.34	7.56	19.289	
1,800.00	1,796.13	1,793.11	1,791.20	4.35	4.09	149.37	78.24	29.63	155.45	147.42	8.04	19.345	
1,900.00	1,895.86	1,892.66	1,890.61	4.61	4.33	149.23	83.39	30.35	165.00	156.49	8.51	19.395	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,000.00	1,995.58	1,992.20	1,990.02	4.87	4.57	149.11	88.55	31.07	174.54	165.57	8.98	19.439	
2,100.00	2,095.31	2,091.74	2,089.42	5.14	4.81	149.01	93.71	31.80	184.09	174.64	9.45	19.478	
2,200.00	2,195.04	2,191.28	2,188.83	5.40	5.05	148.91	98.87	32.52	193.64	183.72	9.92	19.514	
2,300.00	2,294.76	2,290.83	2,288.24	5.67	5.29	148.82	104.03	33.24	203.19	192.79	10.40	19.546	
2,400.00	2,394.49	2,390.37	2,387.64	5.93	5.53	148.74	109.19	33.97	212.74	201.87	10.87	19.575	
2,500.00	2,494.21	2,489.91	2,487.05	6.19	5.77	148.67	114.35	34.69	222.29	210.95	11.34	19.601	
2,592.69	2,586.65	2,582.18	2,579.19	6.44	6.00	148.61	119.13	35.36	231.14	219.36	11.78	19.624	
2,600.00	2,593.94	2,589.46	2,586.45	6.46	6.01	148.61	119.51	35.41	231.83	220.02	11.81	19.627	
2,700.00	2,693.78	2,681.90	2,678.62	6.64	6.25	148.00	126.48	36.39	241.17	228.93	12.24	19.707	
2,805.19	2,798.95	2,778.25	2,774.20	6.82	6.53	57.37	138.45	38.07	251.24	238.54	12.70	19.784	
2,900.00	2,893.76	2,863.90	2,858.56	6.99	6.81	54.90	153.07	40.12	262.25	249.11	13.14	19.959	
3,000.00	2,993.76	2,952.61	2,945.14	7.18	7.13	51.95	172.16	42.80	277.69	264.08	13.62	20.392	
3,100.00	3,093.76	3,039.33	3,028.83	7.36	7.48	48.84	194.64	45.95	297.35	283.25	14.10	21.088	
3,200.00	3,193.76	3,123.78	3,109.26	7.55	7.86	45.72	220.13	49.53	321.41	306.83	14.58	22.044	
3,300.00	3,293.76	3,213.27	3,193.44	7.74	8.30	42.54	250.18	53.74	349.33	334.25	15.08	23.168	
3,400.00	3,393.76	3,307.23	3,281.74	7.94	8.80	39.65	282.01	58.21	378.50	362.93	15.58	24.302	
3,500.00	3,493.76	3,401.20	3,370.04	8.13	9.30	37.17	313.85	62.67	408.46	392.39	16.06	25.427	
3,600.00	3,593.76	3,495.17	3,458.34	8.33	9.83	35.02	345.68	67.14	439.04	422.49	16.55	26.533	
3,700.00	3,693.76	3,589.14	3,546.63	8.53	10.36	33.14	377.51	71.60	470.12	453.09	17.03	27.612	
3,800.00	3,793.76	3,683.10	3,634.93	8.73	10.91	31.50	409.34	76.07	501.60	484.10	17.50	28.660	
3,900.00	3,893.76	3,777.07	3,723.23	8.93	11.46	30.04	441.17	80.53	533.42	515.45	17.98	29.674	
4,000.00	3,993.76	3,871.04	3,811.53	9.13	12.02	28.75	473.01	85.00	565.52	547.07	18.45	30.653	
4,100.00	4,093.76	3,965.01	3,899.83	9.33	12.58	27.59	504.84	89.46	597.86	578.93	18.92	31.596	
4,200.00	4,193.76	4,058.97	3,988.13	9.53	13.16	26.56	536.67	93.93	630.39	610.99	19.39	32.503	
4,300.00	4,293.76	4,152.94	4,076.43	9.74	13.73	25.62	568.50	98.39	663.09	643.22	19.87	33.374	
4,400.00	4,393.76	4,246.91	4,164.72	9.94	14.31	24.77	600.34	102.86	695.93	675.59	20.34	34.211	
4,500.00	4,493.76	4,340.87	4,253.02	10.15	14.90	24.00	632.17	107.32	728.90	708.09	20.82	35.014	
4,600.00	4,593.76	4,440.86	4,347.01	10.35	15.51	23.25	665.95	112.06	761.91	740.61	21.30	35.765	
4,700.00	4,693.76	4,569.74	4,469.39	10.56	16.15	22.45	705.91	117.67	792.28	770.47	21.82	36.315	
4,800.00	4,793.76	4,702.25	4,596.99	10.77	16.72	21.81	741.27	122.63	818.48	796.16	22.32	36.675	
4,900.00	4,893.76	4,837.96	4,729.24	10.98	17.24	21.30	771.39	126.85	840.30	817.49	22.81	36.832	
5,000.00	4,993.76	4,976.37	4,865.44	11.19	17.70	20.92	795.68	130.26	857.59	834.28	23.31	36.795	
5,100.00	5,093.76	5,116.87	5,004.76	11.40	18.08	20.65	813.65	132.78	870.19	846.40	23.79	36.581	
5,200.00	5,193.76	5,258.85	5,146.26	11.61	18.38	20.49	824.92	134.36	878.02	853.76	24.25	36.200	
5,300.00	5,293.76	5,401.61	5,288.94	11.82	18.60	20.43	829.23	134.97	881.00	856.29	24.70	35.661	
5,400.00	5,393.76	5,506.43	5,393.76	12.03	18.73	20.43	829.28	134.97	881.03	855.93	25.10	35.103	
5,500.00	5,493.76	5,606.43	5,493.76	12.24	18.87	20.43	829.28	134.97	881.03	855.52	25.50	34.546	
5,600.00	5,593.76	5,706.43	5,593.76	12.46	19.00	20.43	829.28	134.97	881.03	855.12	25.91	34.004	
5,700.00	5,693.76	5,806.43	5,693.76	12.67	19.14	20.43	829.28	134.97	881.03	854.71	26.32	33.478	
5,800.00	5,793.76	5,906.43	5,793.76	12.88	19.28	20.43	829.28	134.97	881.03	854.30	26.73	32.966	
5,900.00	5,893.76	6,006.43	5,893.76	13.10	19.42	20.43	829.28	134.97	881.03	853.89	27.14	32.467	
6,000.00	5,993.76	6,106.43	5,993.76	13.31	19.56	20.43	829.28	134.97	881.03	853.48	27.55	31.983	
6,100.00	6,093.76	6,206.43	6,093.76	13.53	19.70	20.43	829.28	134.97	881.03	853.07	27.96	31.511	
6,200.00	6,193.76	6,306.43	6,193.76	13.74	19.85	20.43	829.28	134.97	881.03	852.65	28.37	31.052	
6,300.00	6,293.76	6,406.43	6,293.76	13.95	20.00	20.43	829.28	134.97	881.03	852.24	28.79	30.604	
6,400.00	6,393.76	6,506.43	6,393.76	14.17	20.14	20.43	829.28	134.97	881.03	851.82	29.20	30.169	
6,500.00	6,493.76	6,606.43	6,493.76	14.39	20.29	20.43	829.28	134.97	881.03	851.41	29.62	29.745	
6,600.00	6,593.76	6,706.43	6,593.76	14.60	20.44	20.43	829.28	134.97	881.03	850.99	30.04	29.331	
6,700.00	6,693.76	6,806.43	6,693.76	14.82	20.60	20.43	829.28	134.97	881.03	850.57	30.46	28.928	
6,800.00	6,793.76	6,906.43	6,793.76	15.03	20.75	20.43	829.28	134.97	881.03	850.15	30.87	28.536	
6,900.00	6,893.76	7,006.43	6,893.76	15.25	20.90	20.43	829.28	134.97	881.03	849.73	31.29	28.153	
7,000.00	6,993.76	7,106.43	6,993.76	15.47	21.06	20.43	829.28	134.97	881.03	849.31	31.72	27.779	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NBU 920-23L PAD - NBU 920-23L1BS - NBU 920-23L1BS - PLAN #1 2-3-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,100.00	7,093.76	7,206.43	7,093.76	15.69	21.22	20.43	829.28	134.97	881.03	848.89	32.14	27.415	
7,200.00	7,193.76	7,306.43	7,193.76	15.90	21.37	20.43	829.28	134.97	881.03	848.47	32.56	27.059	
7,300.00	7,293.76	7,406.43	7,293.76	16.12	21.53	20.43	829.28	134.97	881.03	848.04	32.98	26.712	
7,400.00	7,393.76	7,506.43	7,393.76	16.34	21.69	20.43	829.28	134.97	881.03	847.62	33.41	26.373	
7,500.00	7,493.76	7,606.43	7,493.76	16.56	21.86	20.43	829.28	134.97	881.03	847.20	33.83	26.042	
7,600.00	7,593.76	7,706.43	7,593.76	16.77	22.02	20.43	829.28	134.97	881.03	846.77	34.26	25.719	
7,700.00	7,693.76	7,806.43	7,693.76	16.99	22.18	20.43	829.28	134.97	881.03	846.35	34.68	25.404	
7,800.00	7,793.76	7,906.43	7,793.76	17.21	22.35	20.43	829.28	134.97	881.03	845.92	35.11	25.095	
7,900.00	7,893.76	8,006.43	7,893.76	17.43	22.51	20.43	829.28	134.97	881.03	845.49	35.53	24.794	
8,000.00	7,993.76	8,106.43	7,993.76	17.65	22.68	20.43	829.28	134.97	881.03	845.07	35.96	24.499	
8,100.00	8,093.76	8,206.43	8,093.76	17.87	22.85	20.43	829.28	134.97	881.03	844.64	36.39	24.211	
8,200.00	8,193.76	8,306.43	8,193.76	18.09	23.02	20.43	829.28	134.97	881.03	844.21	36.82	23.929	
8,300.00	8,293.76	8,406.43	8,293.76	18.31	23.19	20.43	829.28	134.97	881.03	843.78	37.25	23.654	
8,400.00	8,393.76	8,506.43	8,393.76	18.53	23.36	20.43	829.28	134.97	881.03	843.35	37.68	23.384	
8,500.00	8,493.76	8,606.43	8,493.76	18.74	23.53	20.43	829.28	134.97	881.03	842.92	38.11	23.121	
8,600.00	8,593.76	8,706.43	8,593.76	18.96	23.70	20.43	829.28	134.97	881.03	842.49	38.54	22.863	
8,700.00	8,693.76	8,806.43	8,693.76	19.18	23.88	20.43	829.28	134.97	881.03	842.06	38.97	22.610	
8,800.00	8,793.76	8,906.43	8,793.76	19.40	24.05	20.43	829.28	134.97	881.03	841.63	39.40	22.363	
8,900.00	8,893.76	9,006.43	8,893.76	19.62	24.23	20.43	829.28	134.97	881.03	841.20	39.83	22.120	
9,000.00	8,993.76	9,106.43	8,993.76	19.84	24.40	20.43	829.28	134.97	881.03	840.77	40.26	21.883	
9,100.00	9,093.76	9,206.43	9,093.76	20.06	24.58	20.43	829.28	134.97	881.03	840.33	40.69	21.651	
9,200.00	9,193.76	9,306.43	9,193.76	20.28	24.76	20.43	829.28	134.97	881.03	839.90	41.13	21.423	
9,300.00	9,293.76	9,406.43	9,293.76	20.50	24.94	20.43	829.28	134.97	881.03	839.47	41.56	21.200	
9,400.00	9,393.76	9,506.43	9,393.76	20.73	25.12	20.43	829.28	134.97	881.03	839.03	41.99	20.981	
9,500.00	9,493.76	9,606.43	9,493.76	20.95	25.29	20.43	829.28	134.97	881.03	838.60	42.43	20.766	
9,600.00	9,593.76	9,706.43	9,593.76	21.17	25.48	20.43	829.28	134.97	881.03	838.17	42.86	20.556	
9,700.00	9,693.76	9,806.43	9,693.76	21.39	25.66	20.43	829.28	134.97	881.03	837.73	43.29	20.350	
9,800.00	9,793.76	9,906.43	9,793.76	21.61	25.84	20.43	829.28	134.97	881.03	837.30	43.73	20.148	
9,900.00	9,893.76	10,006.43	9,893.76	21.83	26.02	20.43	829.28	134.97	881.03	836.86	44.16	19.949	
10,000.00	9,993.76	10,106.43	9,993.76	22.05	26.20	20.43	829.28	134.97	881.03	836.43	44.60	19.755	
10,100.00	10,093.76	10,206.43	10,093.76	22.27	26.39	20.43	829.28	134.97	881.03	835.99	45.03	19.564	
10,200.00	10,193.76	10,306.43	10,193.76	22.49	26.57	20.43	829.28	134.97	881.03	835.56	45.47	19.376	
10,300.00	10,293.76	10,406.43	10,293.76	22.71	26.76	20.43	829.28	134.97	881.03	835.12	45.91	19.192	
10,400.00	10,393.76	10,506.43	10,393.76	22.93	26.94	20.43	829.28	134.97	881.03	834.69	46.34	19.012	
10,500.00	10,493.76	10,606.43	10,493.76	23.16	27.13	20.43	829.28	134.97	881.03	834.25	46.78	18.834	
10,595.24	10,589.00	10,701.67	10,589.00	23.37	27.31	20.43	829.28	134.97	881.03	833.83	47.19	18.668	



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L2DS - NBU 920-23L2DS - PLAN #1 2-3-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	75.01	2.55	9.52	9.86				
100.00	100.00	100.00	100.00	0.10	0.10	75.01	2.55	9.52	9.86	9.66	0.19	50.991	
200.00	200.00	200.00	200.00	0.32	0.32	75.01	2.55	9.52	9.86	9.21	0.64	15.333	
300.00	300.00	300.00	300.00	0.55	0.55	75.01	2.55	9.52	9.86	8.76	1.09	9.023 CC, ES	
400.00	399.95	399.95	399.93	0.76	0.77	159.07	4.22	9.01	12.35	10.81	1.54	8.019 SF	
441.67	441.54	441.52	441.46	0.86	0.87	155.92	5.89	8.50	14.91	13.18	1.73	8.630	
500.00	499.71	499.68	499.54	0.99	1.00	152.15	8.79	7.61	19.21	17.22	1.99	9.673	
600.00	599.43	599.39	599.12	1.23	1.23	148.50	13.78	6.08	26.68	24.24	2.44	10.939	
700.00	699.16	699.10	698.69	1.48	1.47	146.44	18.77	4.54	34.21	31.31	2.90	11.791	
800.00	798.88	798.81	798.26	1.73	1.70	145.13	23.75	3.01	41.78	38.41	3.37	12.395	
900.00	898.61	898.52	897.84	1.99	1.94	144.23	28.74	1.48	49.35	45.51	3.84	12.844	
1,000.00	998.33	998.23	997.41	2.25	2.18	143.56	33.73	-0.05	56.94	52.62	4.32	13.189	
1,100.00	1,098.06	1,097.94	1,096.98	2.51	2.42	143.05	38.72	-1.58	64.53	59.74	4.79	13.462	
1,200.00	1,197.78	1,197.65	1,196.56	2.77	2.66	142.65	43.71	-3.11	72.13	66.86	5.27	13.684	
1,300.00	1,297.51	1,297.36	1,296.13	3.03	2.90	142.32	48.70	-4.64	79.73	73.98	5.75	13.866	
1,400.00	1,397.23	1,397.07	1,395.70	3.29	3.14	142.05	53.69	-6.17	87.33	81.10	6.23	14.020	
1,500.00	1,496.96	1,496.78	1,495.28	3.56	3.38	141.83	58.68	-7.70	94.93	88.22	6.71	14.150	
1,600.00	1,596.68	1,596.49	1,594.85	3.82	3.62	141.63	63.67	-9.23	102.53	95.35	7.19	14.263	
1,700.00	1,696.41	1,696.20	1,694.42	4.08	3.86	141.47	68.65	-10.76	110.14	102.47	7.67	14.361	
1,800.00	1,796.13	1,795.91	1,794.00	4.35	4.11	141.32	73.64	-12.30	117.74	109.59	8.15	14.446	
1,900.00	1,895.86	1,895.62	1,893.57	4.61	4.35	141.20	78.63	-13.83	125.35	116.72	8.63	14.522	
2,000.00	1,995.58	1,995.33	1,993.14	4.87	4.59	141.09	83.62	-15.36	132.96	123.84	9.11	14.590	
2,100.00	2,095.31	2,095.04	2,092.72	5.14	4.83	140.98	88.61	-16.89	140.57	130.97	9.59	14.650	
2,200.00	2,195.04	2,194.75	2,192.29	5.40	5.07	140.90	93.60	-18.42	148.17	138.10	10.08	14.705	
2,300.00	2,294.76	2,294.46	2,291.86	5.67	5.31	140.81	98.59	-19.95	155.78	145.22	10.56	14.754	
2,400.00	2,394.49	2,394.17	2,391.44	5.93	5.55	140.74	103.58	-21.48	163.39	152.35	11.04	14.799	
2,500.00	2,494.21	2,493.88	2,491.01	6.19	5.79	140.67	108.56	-23.01	171.00	159.48	11.52	14.841	
2,592.69	2,586.65	2,586.30	2,583.31	6.44	6.02	140.62	113.19	-24.43	178.05	166.08	11.97	14.876	
2,600.00	2,593.94	2,593.57	2,590.56	6.46	6.04	140.62	113.55	-24.54	178.60	166.60	12.00	14.879	
2,700.00	2,693.78	2,689.88	2,686.57	6.64	6.29	139.56	120.71	-26.74	185.62	173.17	12.45	14.907	
2,805.19	2,798.95	2,790.23	2,786.07	6.82	6.58	47.64	133.09	-30.54	192.55	179.59	12.95	14.864	
2,900.00	2,893.76	2,879.27	2,873.68	6.99	6.87	43.52	148.24	-35.19	200.41	186.97	13.44	14.911	
3,000.00	2,993.76	2,971.36	2,963.42	7.18	7.21	38.61	167.99	-41.25	212.50	198.53	13.97	15.211	
3,100.00	3,093.76	3,061.24	3,049.94	7.36	7.59	33.49	191.24	-48.39	229.16	214.67	14.50	15.807	
3,200.00	3,193.76	3,148.61	3,132.85	7.55	8.00	28.48	217.54	-56.46	250.85	235.84	15.01	16.713	
3,300.00	3,293.76	3,241.53	3,220.18	7.74	8.48	23.60	247.89	-65.78	276.52	260.99	15.52	17.812	
3,400.00	3,393.76	3,335.50	3,308.48	7.94	8.99	19.48	278.62	-75.21	303.89	287.87	16.02	18.973	
3,500.00	3,493.76	3,429.47	3,396.78	8.13	9.51	16.03	309.34	-84.65	332.53	316.03	16.49	20.162	
3,600.00	3,593.76	3,523.44	3,485.08	8.33	10.04	13.12	340.06	-94.08	362.13	345.17	16.96	21.353	
3,700.00	3,693.76	3,617.41	3,573.39	8.53	10.59	10.64	370.79	-103.51	392.49	375.07	17.42	22.533	
3,800.00	3,793.76	3,711.38	3,661.69	8.73	11.15	8.51	401.51	-112.94	423.43	405.55	17.87	23.688	
3,900.00	3,893.76	3,805.34	3,749.99	8.93	11.71	6.67	432.24	-122.37	454.83	436.50	18.33	24.814	
4,000.00	3,993.76	3,899.31	3,838.29	9.13	12.29	5.06	462.96	-131.80	486.62	467.83	18.78	25.905	
4,100.00	4,093.76	3,993.28	3,926.60	9.33	12.87	3.65	493.68	-141.24	518.71	499.47	19.24	26.959	
4,200.00	4,193.76	4,102.25	4,029.38	9.53	13.48	2.25	528.25	-151.85	550.14	530.43	19.71	27.915	
4,300.00	4,293.76	4,219.82	4,141.71	9.74	14.01	1.07	561.44	-162.04	578.25	558.10	20.15	28.701	
4,400.00	4,393.76	4,340.23	4,258.11	9.94	14.52	0.14	590.84	-171.06	602.66	582.07	20.59	29.264	
4,500.00	4,493.76	4,463.14	4,378.16	10.15	14.98	-0.59	616.00	-178.79	623.21	602.16	21.04	29.616	
4,600.00	4,593.76	4,588.15	4,501.31	10.35	15.39	-1.14	636.52	-185.08	639.72	618.22	21.49	29.765	
4,700.00	4,693.76	4,714.85	4,626.94	10.56	15.74	-1.53	652.05	-189.85	652.07	630.14	21.94	29.727	
4,800.00	4,793.76	4,842.75	4,754.38	10.77	16.02	-1.78	662.33	-193.01	660.19	637.81	22.37	29.511	
4,900.00	4,893.76	4,971.36	4,882.88	10.98	16.24	-1.90	667.18	-194.50	663.99	641.19	22.80	29.126	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L2DS - NBU 920-23L2DS - PLAN #1 2-3-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,993.76	5,082.24	4,993.76	11.19	16.39	-1.91	667.57	-194.62	664.30	641.10	23.20	28.637	
5,100.00	5,093.76	5,182.24	5,093.76	11.40	16.53	-1.91	667.57	-194.62	664.30	640.70	23.60	28.150	
5,200.00	5,193.76	5,282.24	5,193.76	11.61	16.67	-1.91	667.57	-194.62	664.30	640.29	24.00	27.674	
5,300.00	5,293.76	5,382.24	5,293.76	11.82	16.82	-1.91	667.57	-194.62	664.30	639.89	24.41	27.213	
5,400.00	5,393.76	5,482.24	5,393.76	12.03	16.97	-1.91	667.57	-194.62	664.30	639.48	24.82	26.765	
5,500.00	5,493.76	5,582.24	5,493.76	12.24	17.12	-1.91	667.57	-194.62	664.30	639.07	25.23	26.329	
5,600.00	5,593.76	5,682.24	5,593.76	12.46	17.27	-1.91	667.57	-194.62	664.30	638.66	25.64	25.907	
5,700.00	5,693.76	5,782.24	5,693.76	12.67	17.42	-1.91	667.57	-194.62	664.30	638.24	26.05	25.497	
5,800.00	5,793.76	5,882.24	5,793.76	12.88	17.57	-1.91	667.57	-194.62	664.30	637.83	26.47	25.098	
5,900.00	5,893.76	5,982.24	5,893.76	13.10	17.73	-1.91	667.57	-194.62	664.30	637.42	26.88	24.711	
6,000.00	5,993.76	6,082.24	5,993.76	13.31	17.89	-1.91	667.57	-194.62	664.30	637.00	27.30	24.334	
6,100.00	6,093.76	6,182.24	6,093.76	13.53	18.04	-1.91	667.57	-194.62	664.30	636.58	27.72	23.968	
6,200.00	6,193.76	6,282.24	6,193.76	13.74	18.20	-1.91	667.57	-194.62	664.30	636.16	28.13	23.612	
6,300.00	6,293.76	6,382.24	6,293.76	13.95	18.36	-1.91	667.57	-194.62	664.30	635.74	28.55	23.265	
6,400.00	6,393.76	6,482.24	6,393.76	14.17	18.53	-1.91	667.57	-194.62	664.30	635.32	28.97	22.928	
6,500.00	6,493.76	6,582.24	6,493.76	14.39	18.69	-1.91	667.57	-194.62	664.30	634.90	29.39	22.600	
6,600.00	6,593.76	6,682.24	6,593.76	14.60	18.86	-1.91	667.57	-194.62	664.30	634.48	29.82	22.280	
6,700.00	6,693.76	6,782.24	6,693.76	14.82	19.02	-1.91	667.57	-194.62	664.30	634.06	30.24	21.969	
6,800.00	6,793.76	6,882.24	6,793.76	15.03	19.19	-1.91	667.57	-194.62	664.30	633.64	30.66	21.666	
6,900.00	6,893.76	6,982.24	6,893.76	15.25	19.36	-1.91	667.57	-194.62	664.30	633.21	31.09	21.370	
7,000.00	6,993.76	7,082.24	6,993.76	15.47	19.53	-1.91	667.57	-194.62	664.30	632.79	31.51	21.082	
7,100.00	7,093.76	7,182.24	7,093.76	15.69	19.70	-1.91	667.57	-194.62	664.30	632.36	31.94	20.802	
7,200.00	7,193.76	7,282.24	7,193.76	15.90	19.87	-1.91	667.57	-194.62	664.30	631.94	32.36	20.528	
7,300.00	7,293.76	7,382.24	7,293.76	16.12	20.04	-1.91	667.57	-194.62	664.30	631.51	32.79	20.261	
7,400.00	7,393.76	7,482.24	7,393.76	16.34	20.22	-1.91	667.57	-194.62	664.30	631.08	33.21	20.000	
7,500.00	7,493.76	7,582.24	7,493.76	16.56	20.39	-1.91	667.57	-194.62	664.30	630.66	33.64	19.746	
7,600.00	7,593.76	7,682.24	7,593.76	16.77	20.57	-1.91	667.57	-194.62	664.30	630.23	34.07	19.498	
7,700.00	7,693.76	7,782.24	7,693.76	16.99	20.75	-1.91	667.57	-194.62	664.30	629.80	34.50	19.255	
7,800.00	7,793.76	7,882.24	7,793.76	17.21	20.92	-1.91	667.57	-194.62	664.30	629.37	34.93	19.019	
7,900.00	7,893.76	7,982.24	7,893.76	17.43	21.10	-1.91	667.57	-194.62	664.30	628.94	35.36	18.787	
8,000.00	7,993.76	8,082.24	7,993.76	17.65	21.28	-1.91	667.57	-194.62	664.30	628.51	35.79	18.562	
8,100.00	8,093.76	8,182.24	8,093.76	17.87	21.46	-1.91	667.57	-194.62	664.30	628.08	36.22	18.341	
8,200.00	8,193.76	8,282.24	8,193.76	18.09	21.64	-1.91	667.57	-194.62	664.30	627.65	36.65	18.125	
8,300.00	8,293.76	8,382.24	8,293.76	18.31	21.83	-1.91	667.57	-194.62	664.30	627.22	37.08	17.914	
8,400.00	8,393.76	8,482.24	8,393.76	18.53	22.01	-1.91	667.57	-194.62	664.30	626.78	37.51	17.708	
8,500.00	8,493.76	8,582.24	8,493.76	18.74	22.19	-1.91	667.57	-194.62	664.30	626.35	37.95	17.506	
8,600.00	8,593.76	8,682.24	8,593.76	18.96	22.38	-1.91	667.57	-194.62	664.30	625.92	38.38	17.308	
8,700.00	8,693.76	8,782.24	8,693.76	19.18	22.56	-1.91	667.57	-194.62	664.30	625.48	38.81	17.115	
8,800.00	8,793.76	8,882.24	8,793.76	19.40	22.75	-1.91	667.57	-194.62	664.30	625.05	39.25	16.926	
8,900.00	8,893.76	8,982.24	8,893.76	19.62	22.93	-1.91	667.57	-194.62	664.30	624.62	39.68	16.741	
9,000.00	8,993.76	9,082.24	8,993.76	19.84	23.12	-1.91	667.57	-194.62	664.30	624.18	40.12	16.560	
9,100.00	9,093.76	9,182.24	9,093.76	20.06	23.31	-1.91	667.57	-194.62	664.30	623.75	40.55	16.382	
9,200.00	9,193.76	9,282.24	9,193.76	20.28	23.50	-1.91	667.57	-194.62	664.30	623.31	40.98	16.208	
9,300.00	9,293.76	9,382.24	9,293.76	20.50	23.69	-1.91	667.57	-194.62	664.30	622.88	41.42	16.038	
9,400.00	9,393.76	9,482.24	9,393.76	20.73	23.88	-1.91	667.57	-194.62	664.30	622.44	41.86	15.871	
9,500.00	9,493.76	9,582.24	9,493.76	20.95	24.07	-1.91	667.57	-194.62	664.30	622.01	42.29	15.708	
9,600.00	9,593.76	9,682.24	9,593.76	21.17	24.26	-1.91	667.57	-194.62	664.30	621.57	42.73	15.547	
9,700.00	9,693.76	9,782.24	9,693.76	21.39	24.45	-1.91	667.57	-194.62	664.30	621.13	43.16	15.390	
9,800.00	9,793.76	9,882.24	9,793.76	21.61	24.64	-1.91	667.57	-194.62	664.30	620.70	43.60	15.236	
9,900.00	9,893.76	9,982.24	9,893.76	21.83	24.83	-1.91	667.57	-194.62	664.30	620.26	44.04	15.085	
10,000.00	9,993.76	10,082.24	9,993.76	22.05	25.03	-1.91	667.57	-194.62	664.30	619.82	44.47	14.936	
10,100.00	10,093.76	10,182.24	10,093.76	22.27	25.22	-1.91	667.57	-194.62	664.30	619.39	44.91	14.791	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NBU 920-23L PAD - NBU 920-23L2DS - NBU 920-23L2DS - PLAN #1 2-3-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,200.00	10,193.76	10,282.24	10,193.76	22.49	25.42	-1.91	667.57	-194.62	664.30	618.95	45.35	14.648	
10,300.00	10,293.76	10,382.24	10,293.76	22.71	25.61	-1.91	667.57	-194.62	664.30	618.51	45.79	14.508	
10,400.00	10,393.76	10,482.24	10,393.76	22.93	25.81	-1.91	667.57	-194.62	664.30	618.07	46.23	14.371	
10,500.00	10,493.76	10,582.24	10,493.76	23.16	26.00	-1.91	667.57	-194.62	664.30	617.63	46.66	14.236	
10,595.24	10,589.00	10,677.48	10,589.00	23.37	26.19	-1.91	667.57	-194.62	664.30	617.22	47.08	14.109	



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	75.83	7.28	28.84	29.75				
100.00	100.00	100.00	100.00	0.10	0.10	75.83	7.28	28.84	29.75	29.56	0.19	153.901	
200.00	200.00	200.00	200.00	0.32	0.32	75.83	7.28	28.84	29.75	29.11	0.64	46.278	
300.00	300.00	300.00	300.00	0.55	0.55	75.83	7.28	28.84	29.75	28.66	1.09	27.234 CC, ES	
400.00	399.95	398.57	398.52	0.76	0.77	163.13	9.28	30.42	34.33	32.79	1.54	22.229	
441.67	441.54	439.33	439.21	0.86	0.87	161.98	11.27	31.99	38.95	37.20	1.74	22.331	
500.00	499.71	496.60	496.28	0.99	1.01	160.21	15.04	34.96	47.07	45.06	2.01	23.396	
600.00	599.43	595.56	594.86	1.23	1.24	158.09	21.80	40.31	61.34	58.89	2.45	25.042	
700.00	699.16	694.51	693.44	1.48	1.50	156.78	28.57	45.65	75.67	72.78	2.90	26.123	
800.00	798.88	793.47	792.01	1.73	1.76	155.88	35.34	51.00	90.03	86.68	3.35	26.868	
900.00	898.61	892.43	890.59	1.99	2.02	155.23	42.11	56.34	104.40	100.59	3.81	27.408	
1,000.00	998.33	991.38	989.17	2.25	2.29	154.73	48.88	61.69	118.78	114.51	4.27	27.815	
1,100.00	1,098.06	1,090.34	1,087.75	2.51	2.55	154.35	55.65	67.03	133.17	128.43	4.73	28.131	
1,200.00	1,197.78	1,189.29	1,186.33	2.77	2.82	154.04	62.42	72.38	147.56	142.36	5.20	28.384	
1,300.00	1,297.51	1,288.25	1,284.91	3.03	3.09	153.78	69.19	77.72	161.95	156.29	5.66	28.589	
1,400.00	1,397.23	1,387.21	1,383.49	3.29	3.35	153.56	75.95	83.07	176.35	170.22	6.13	28.760	
1,500.00	1,496.96	1,486.16	1,482.07	3.56	3.62	153.38	82.72	88.41	190.75	184.15	6.60	28.905	
1,600.00	1,596.68	1,585.12	1,580.65	3.82	3.89	153.23	89.49	93.76	205.15	198.09	7.07	29.027	
1,700.00	1,696.41	1,684.07	1,679.23	4.08	4.16	153.09	96.26	99.10	219.56	212.02	7.54	29.133	
1,800.00	1,796.13	1,783.03	1,777.81	4.35	4.43	152.97	103.03	104.45	233.96	225.96	8.01	29.225	
1,900.00	1,895.86	1,881.99	1,876.39	4.61	4.70	152.87	109.80	109.79	248.37	239.89	8.47	29.306	
2,000.00	1,995.58	1,980.94	1,974.97	4.87	4.97	152.77	116.57	115.14	262.77	253.83	8.94	29.378	
2,100.00	2,095.31	2,079.90	2,073.55	5.14	5.24	152.69	123.34	120.48	277.18	267.76	9.41	29.442	
2,200.00	2,195.04	2,178.85	2,172.13	5.40	5.51	152.61	130.10	125.83	291.59	281.70	9.88	29.499	
2,300.00	2,294.76	2,277.81	2,270.71	5.67	5.78	152.54	136.87	131.17	305.99	295.64	10.35	29.551	
2,400.00	2,394.49	2,376.77	2,369.29	5.93	6.05	152.48	143.64	136.52	320.40	309.58	10.83	29.597	
2,500.00	2,494.21	2,475.72	2,467.87	6.19	6.32	152.42	150.41	141.86	334.81	323.51	11.30	29.640	
2,592.69	2,586.65	2,567.45	2,559.24	6.44	6.57	152.38	156.68	146.82	348.16	336.43	11.73	29.676	
2,600.00	2,593.94	2,574.68	2,566.45	6.46	6.59	152.38	157.18	147.21	349.21	337.44	11.77	29.679	
2,700.00	2,693.78	2,679.83	2,671.24	6.64	6.85	152.32	164.00	152.59	361.48	349.28	12.20	29.633	
2,805.19	2,798.95	2,798.50	2,789.76	6.82	7.08	63.36	168.50	156.14	367.79	355.17	12.61	29.159	
2,900.00	2,893.76	2,902.51	2,893.76	6.99	7.25	63.29	169.35	156.82	368.66	355.68	12.98	28.403	
3,000.00	2,993.76	3,002.51	2,993.76	7.18	7.44	63.29	169.35	156.82	368.66	355.27	13.39	27.542	
3,100.00	3,093.76	3,102.51	3,093.76	7.36	7.63	63.29	169.35	156.82	368.66	354.87	13.79	26.726	
3,200.00	3,193.76	3,202.51	3,193.76	7.55	7.83	63.29	169.35	156.82	368.66	354.45	14.20	25.953	
3,300.00	3,293.76	3,302.51	3,293.76	7.74	8.02	63.29	169.35	156.82	368.66	354.04	14.62	25.219	
3,400.00	3,393.76	3,402.51	3,393.76	7.94	8.22	63.29	169.35	156.82	368.66	353.63	15.03	24.522	
3,500.00	3,493.76	3,502.51	3,493.76	8.13	8.41	63.29	169.35	156.82	368.66	353.21	15.45	23.860	
3,600.00	3,593.76	3,602.51	3,593.76	8.33	8.61	63.29	169.35	156.82	368.66	352.79	15.87	23.230	
3,700.00	3,693.76	3,702.51	3,693.76	8.53	8.81	63.29	169.35	156.82	368.66	352.37	16.29	22.630	
3,800.00	3,793.76	3,802.51	3,793.76	8.73	9.01	63.29	169.35	156.82	368.66	351.95	16.71	22.059	
3,900.00	3,893.76	3,902.51	3,893.76	8.93	9.22	63.29	169.35	156.82	368.66	351.52	17.14	21.513	
4,000.00	3,993.76	4,002.51	3,993.76	9.13	9.42	63.29	169.35	156.82	368.66	351.10	17.56	20.993	
4,100.00	4,093.76	4,102.51	4,093.76	9.33	9.62	63.29	169.35	156.82	368.66	350.67	17.99	20.496	
4,200.00	4,193.76	4,202.51	4,193.76	9.53	9.83	63.29	169.35	156.82	368.66	350.24	18.41	20.020	
4,300.00	4,293.76	4,302.51	4,293.76	9.74	10.03	63.29	169.35	156.82	368.66	349.82	18.84	19.565	
4,400.00	4,393.76	4,402.51	4,393.76	9.94	10.24	63.29	169.35	156.82	368.66	349.39	19.27	19.129	
4,500.00	4,493.76	4,502.51	4,493.76	10.15	10.45	63.29	169.35	156.82	368.66	348.96	19.70	18.712	
4,600.00	4,593.76	4,602.51	4,593.76	10.35	10.66	63.29	169.35	156.82	368.66	348.53	20.13	18.311	
4,700.00	4,693.76	4,702.51	4,693.76	10.56	10.86	63.29	169.35	156.82	368.66	348.09	20.56	17.927	
4,800.00	4,793.76	4,802.51	4,793.76	10.77	11.07	63.29	169.35	156.82	368.66	347.66	21.00	17.558	
4,900.00	4,893.76	4,902.51	4,893.76	10.98	11.28	63.29	169.35	156.82	368.66	347.23	21.43	17.203	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design NBU 920-23L PAD - NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10 RHS												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.00	4,993.76	5,002.51	4,993.76	11.19	11.49	63.29	169.35	156.82	368.66	346.80	21.86	16.861	
5,100.00	5,093.76	5,102.51	5,093.76	11.40	11.71	63.29	169.35	156.82	368.66	346.36	22.30	16.533	
5,200.00	5,193.76	5,202.51	5,193.76	11.61	11.92	63.29	169.35	156.82	368.66	345.93	22.73	16.216	
5,300.00	5,293.76	5,302.51	5,293.76	11.82	12.13	63.29	169.35	156.82	368.66	345.49	23.17	15.911	
5,400.00	5,393.76	5,402.51	5,393.76	12.03	12.34	63.29	169.35	156.82	368.66	345.05	23.61	15.617	
5,500.00	5,493.76	5,502.51	5,493.76	12.24	12.55	63.29	169.35	156.82	368.66	344.62	24.04	15.334	
5,600.00	5,593.76	5,602.51	5,593.76	12.46	12.77	63.29	169.35	156.82	368.66	344.18	24.48	15.060	
5,700.00	5,693.76	5,702.51	5,693.76	12.67	12.98	63.29	169.35	156.82	368.66	343.74	24.92	14.796	
5,800.00	5,793.76	5,802.51	5,793.76	12.88	13.20	63.29	169.35	156.82	368.66	343.30	25.35	14.540	
5,900.00	5,893.76	5,902.51	5,893.76	13.10	13.41	63.29	169.35	156.82	368.66	342.87	25.79	14.293	
6,000.00	5,993.76	6,002.51	5,993.76	13.31	13.63	63.29	169.35	156.82	368.66	342.43	26.23	14.054	
6,100.00	6,093.76	6,102.51	6,093.76	13.53	13.84	63.29	169.35	156.82	368.66	341.99	26.67	13.822	
6,200.00	6,193.76	6,202.51	6,193.76	13.74	14.06	63.29	169.35	156.82	368.66	341.55	27.11	13.598	
6,300.00	6,293.76	6,302.51	6,293.76	13.95	14.27	63.29	169.35	156.82	368.66	341.11	27.55	13.381	
6,400.00	6,393.76	6,402.51	6,393.76	14.17	14.49	63.29	169.35	156.82	368.66	340.67	27.99	13.171	
6,500.00	6,493.76	6,502.51	6,493.76	14.39	14.70	63.29	169.35	156.82	368.66	340.23	28.43	12.967	
6,600.00	6,593.76	6,602.51	6,593.76	14.60	14.92	63.29	169.35	156.82	368.66	339.79	28.87	12.769	
6,700.00	6,693.76	6,702.51	6,693.76	14.82	15.14	63.29	169.35	156.82	368.66	339.35	29.31	12.577	
6,800.00	6,793.76	6,802.51	6,793.76	15.03	15.35	63.29	169.35	156.82	368.66	338.91	29.75	12.390	
6,900.00	6,893.76	6,902.51	6,893.76	15.25	15.57	63.29	169.35	156.82	368.66	338.46	30.20	12.209	
7,000.00	6,993.76	7,002.51	6,993.76	15.47	15.79	63.29	169.35	156.82	368.66	338.02	30.64	12.033	
7,100.00	7,093.76	7,102.51	7,093.76	15.69	16.01	63.29	169.35	156.82	368.66	337.58	31.08	11.862	
7,200.00	7,193.76	7,202.51	7,193.76	15.90	16.22	63.29	169.35	156.82	368.66	337.14	31.52	11.696	
7,300.00	7,293.76	7,302.51	7,293.76	16.12	16.44	63.29	169.35	156.82	368.66	336.70	31.96	11.534	
7,400.00	7,393.76	7,402.51	7,393.76	16.34	16.66	63.29	169.35	156.82	368.66	336.25	32.41	11.376	
7,500.00	7,493.76	7,502.51	7,493.76	16.56	16.88	63.29	169.35	156.82	368.66	335.81	32.85	11.223	
7,600.00	7,593.76	7,602.51	7,593.76	16.77	17.10	63.29	169.35	156.82	368.66	335.37	33.29	11.074	
7,700.00	7,693.76	7,702.51	7,693.76	16.99	17.32	63.29	169.35	156.82	368.66	334.93	33.73	10.928	
7,800.00	7,793.76	7,802.51	7,793.76	17.21	17.54	63.29	169.35	156.82	368.66	334.48	34.18	10.787	
7,900.00	7,893.76	7,902.51	7,893.76	17.43	17.75	63.29	169.35	156.82	368.66	334.04	34.62	10.648	
8,000.00	7,993.76	8,002.51	7,993.76	17.65	17.97	63.29	169.35	156.82	368.66	333.59	35.06	10.514	
8,100.00	8,093.76	8,102.51	8,093.76	17.87	18.19	63.29	169.35	156.82	368.66	333.15	35.51	10.382	
8,200.00	8,193.76	8,202.51	8,193.76	18.09	18.41	63.29	169.35	156.82	368.66	332.71	35.95	10.254	
8,300.00	8,293.76	8,302.51	8,293.76	18.31	18.63	63.29	169.35	156.82	368.66	332.26	36.40	10.129	
8,400.00	8,393.76	8,402.51	8,393.76	18.53	18.85	63.29	169.35	156.82	368.66	331.82	36.84	10.007	
8,500.00	8,493.76	8,502.51	8,493.76	18.74	19.07	63.29	169.35	156.82	368.66	331.38	37.28	9.888	
8,600.00	8,593.76	8,602.51	8,593.76	18.96	19.29	63.29	169.35	156.82	368.66	330.93	37.73	9.771	
8,700.00	8,693.76	8,702.51	8,693.76	19.18	19.51	63.29	169.35	156.82	368.66	330.49	38.17	9.658	
8,800.00	8,793.76	8,802.51	8,793.76	19.40	19.73	63.29	169.35	156.82	368.66	330.04	38.62	9.546	
8,900.00	8,893.76	8,902.51	8,893.76	19.62	19.95	63.29	169.35	156.82	368.66	329.60	39.06	9.438	
9,000.00	8,993.76	9,002.51	8,993.76	19.84	20.17	63.29	169.35	156.82	368.66	329.15	39.51	9.331	
9,100.00	9,093.76	9,102.51	9,093.76	20.06	20.39	63.29	169.35	156.82	368.66	328.71	39.95	9.227	
9,200.00	9,193.76	9,202.51	9,193.76	20.28	20.61	63.29	169.35	156.82	368.66	328.26	40.40	9.126	
9,300.00	9,293.76	9,302.51	9,293.76	20.50	20.83	63.29	169.35	156.82	368.66	327.82	40.84	9.026	
9,400.00	9,393.76	9,402.51	9,393.76	20.73	21.06	63.29	169.35	156.82	368.66	327.37	41.29	8.929	
9,500.00	9,493.76	9,502.51	9,493.76	20.95	21.28	63.29	169.35	156.82	368.66	326.93	41.73	8.834	
9,600.00	9,593.76	9,602.51	9,593.76	21.17	21.50	63.29	169.35	156.82	368.66	326.48	42.18	8.740	
9,700.00	9,693.76	9,702.51	9,693.76	21.39	21.72	63.29	169.35	156.82	368.66	326.04	42.62	8.649	
9,800.00	9,793.76	9,802.51	9,793.76	21.61	21.94	63.29	169.35	156.82	368.66	325.59	43.07	8.560	
9,900.00	9,893.76	9,902.51	9,893.76	21.83	22.16	63.29	169.35	156.82	368.66	325.14	43.52	8.472	
10,000.00	9,993.76	10,002.51	9,993.76	22.05	22.38	63.29	169.35	156.82	368.66	324.70	43.96	8.386	
10,100.00	10,093.76	10,102.51	10,093.76	22.27	22.60	63.29	169.35	156.82	368.66	324.25	44.41	8.302	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NBU 920-23L PAD - NBU 920-23L4BS - NBU 920-23L4BS - PLAN #1 2-3-10 RHS												<b>Offset Site Error:</b>	0.00 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.00 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.00	10,193.76	10,202.51	10,193.76	22.49	22.82	63.29	169.35	156.82	368.66	323.81	44.85	8.219	
10,300.00	10,293.76	10,302.51	10,293.76	22.71	23.05	63.29	169.35	156.82	368.66	323.36	45.30	8.138	
10,400.00	10,393.76	10,402.51	10,393.76	22.93	23.27	63.29	169.35	156.82	368.66	322.91	45.74	8.059	
10,500.00	10,493.76	10,502.51	10,493.76	23.16	23.49	63.29	169.35	156.82	368.66	322.47	46.19	7.981	
10,561.36	10,555.12	10,563.87	10,555.12	23.29	23.63	63.29	169.35	156.82	368.66	322.19	46.46	7.934	
10,595.24	10,589.00	10,591.75	10,583.00	23.37	23.69	63.29	169.35	156.82	368.71	322.11	46.60	7.912 SF	



<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

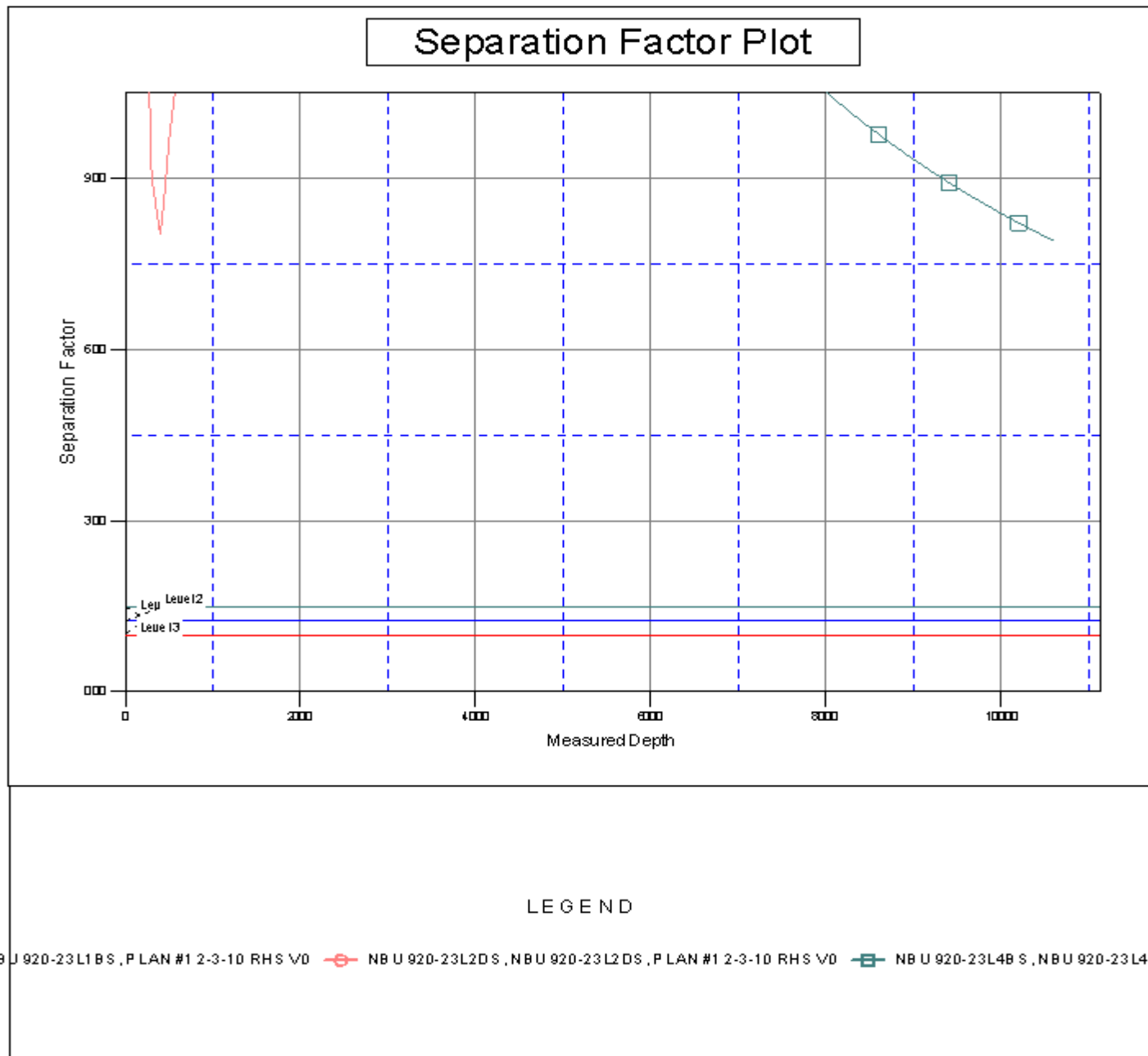
Reference Depths are relative to WELL @ 4873.00ft (Original Well Elev) Coordinates are relative to: NBU 920-23L3DS  
Offset Depths are relative to Offset Datum  
Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N  
Central Meridian is 111° 0' 0.000 W °  
Grid Convergence at Surface is: 0.87°





<b>Company:</b>	ANADARKO PETROLEUM CORP.	<b>Local Co-ordinate Reference:</b>	Well NBU 920-23L3DS
<b>Project:</b>	UINTAH COUNTY, UTAH (nad 27)	<b>TVD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Reference Site:</b>	NBU 920-23L PAD	<b>MD Reference:</b>	WELL @ 4873.00ft (Original Well Elev)
<b>Site Error:</b>	0.00ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	NBU 920-23L3DS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	NBU 920-23L3DS	<b>Database:</b>	EDM 2003.21 Single User Db
<b>Reference Design:</b>	PLAN #1 2-3-10 RHS	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4873.00ft (Original Well Elev) Coordinates are relative to: NBU 920-23L3DS  
Offset Depths are relative to Offset Datum Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 12N  
Central Meridian is 111° 0' 0.000 W ° Grid Convergence at Surface is: 0.87°

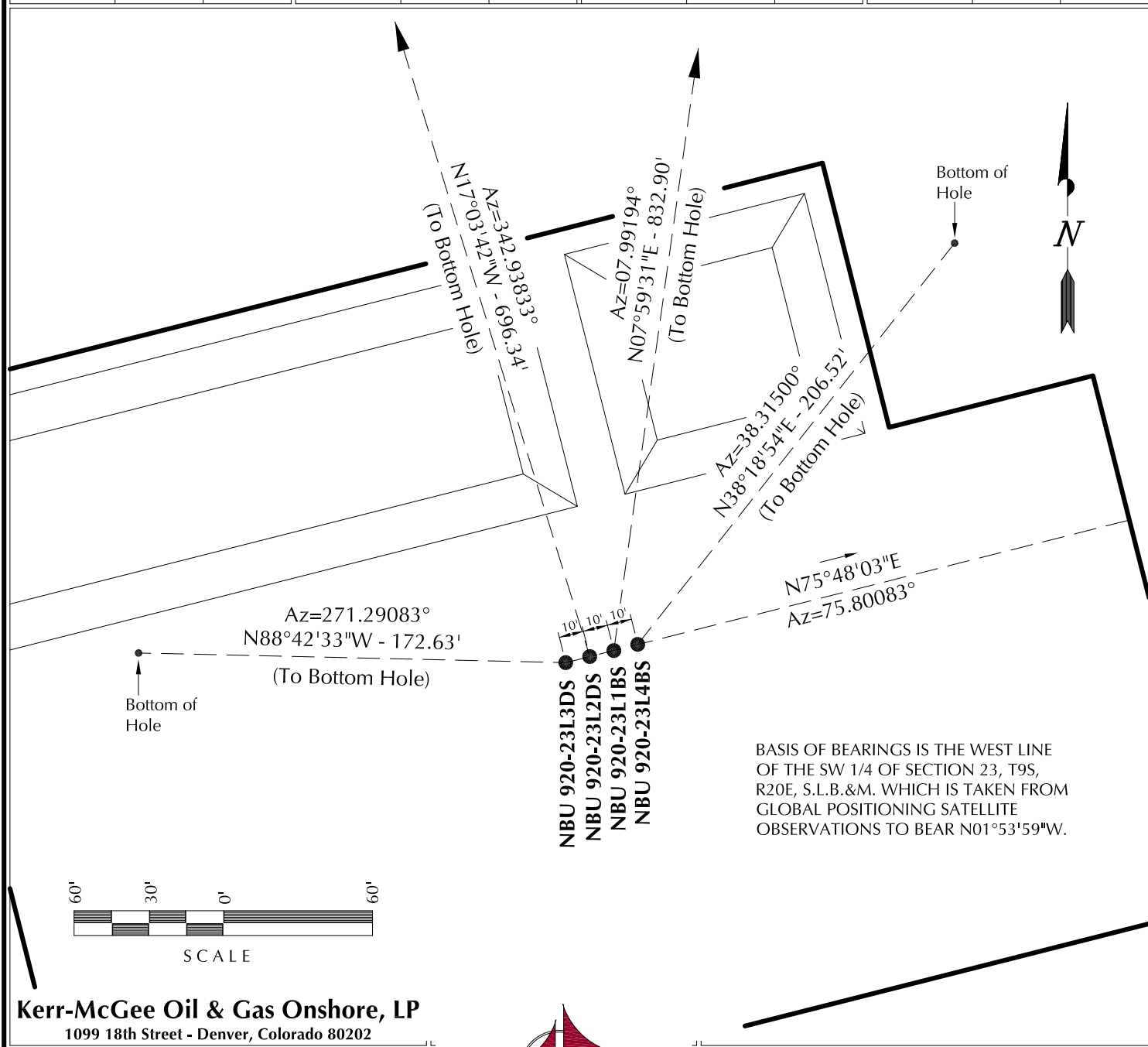




WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 920-23L4BS	40°01'03.625"	109°38'28.343"	40°01'03.753"	109°38'25.852"	1497' FSL	40°01'05.226"	109°38'26.699"	40°01'05.354"	109°38'24.207"	1660' FSL
NBU 920-23L1BS	40°01'03.600"	109°38'28.468"	40°01'03.728"	109°38'25.976"	1494' FSL	40°01'11.750"	109°38'26.982"	40°01'11.877"	109°38'24.490"	2320' FSL
NBU 920-23L2DS	40°01'03.577"	109°38'28.593"	40°01'03.704"	109°38'26.102"	1491' FSL	40°01'10.153"	109°38'31.220"	40°01'10.281"	109°38'28.728"	2155' FSL
NBU 920-23L3DS	40°01'03.552"	109°38'28.717"	40°01'03.680"	109°38'26.226"	1489' FSL	40°01'03.590"	109°38'30.935"	40°01'03.718"	109°38'28.443"	1491' FSL
NBU 920-23L3DS	40°01'03.552"	109°38'28.717"	40°01'03.680"	109°38'26.226"	1489' FSL	40°01'03.590"	109°38'30.935"	40°01'03.718"	109°38'28.443"	1491' FSL
NBU 920-23L3DS	40°01'03.552"	109°38'28.717"	40°01'03.680"	109°38'26.226"	1489' FSL	40°01'03.590"	109°38'30.935"	40°01'03.718"	109°38'28.443"	1491' FSL
NBU 920-23L3DS	40°01'03.552"	109°38'28.717"	40°01'03.680"	109°38'26.226"	1489' FSL	40°01'03.590"	109°38'30.935"	40°01'03.718"	109°38'28.443"	1491' FSL

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 920-23L4BS	162.0'	128.0'	NBU 920-23L1BS	824.8'	115.8'	NBU 920-23L2DS	665.7'	-204.3'	NBU 920-23L3DS	3.9'	-172.6'



Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 920-23L

WELL PAD INTERFERENCE PLAT  
WELLS - NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS  
LOCATED IN SECTION 23, T9S, R20E,  
S.L.B.&M., UTAH COUNTY, UTAH.



CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

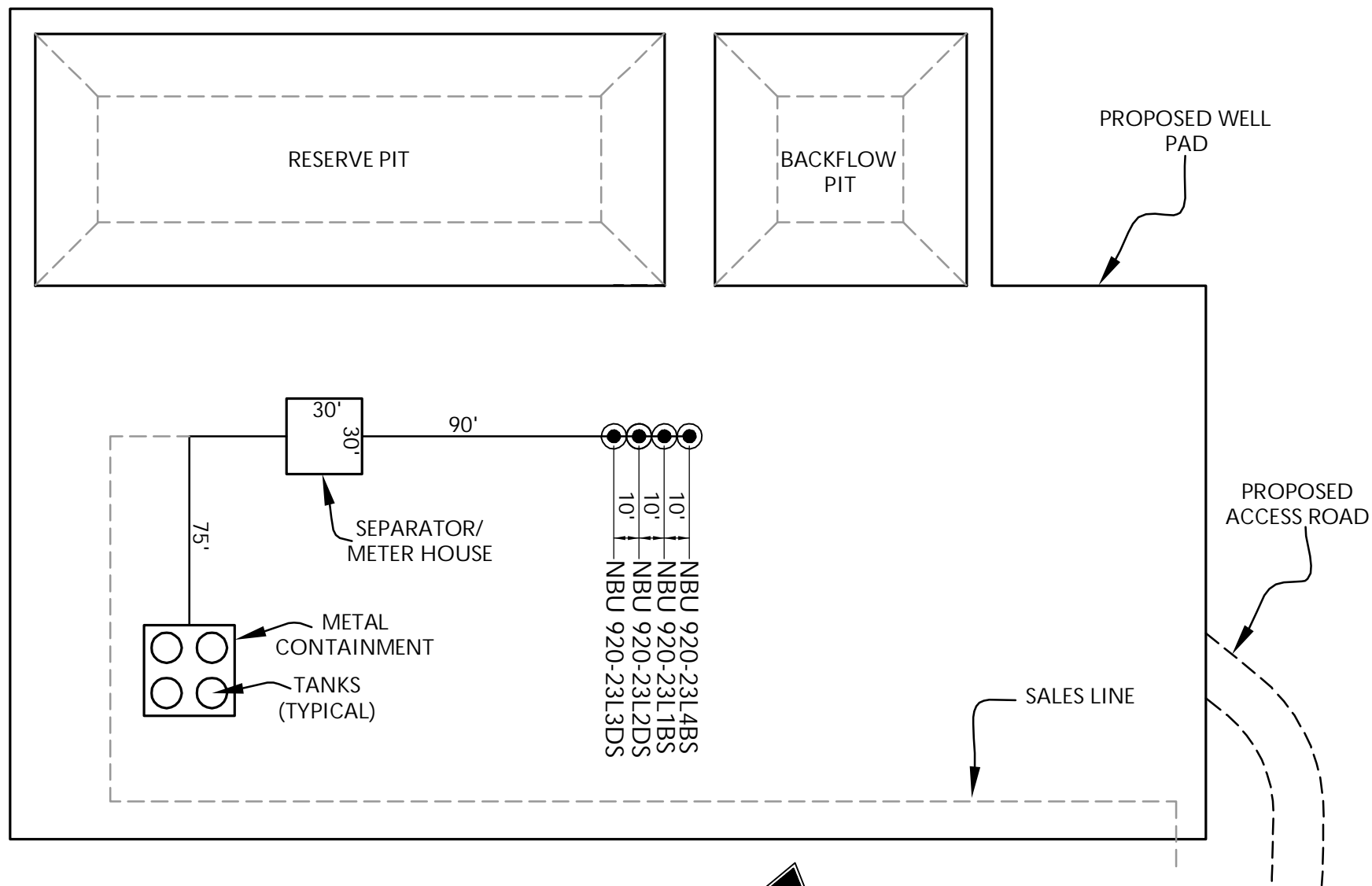
DATE SURVEYED: 12-03-09	SURVEYED BY: M.S.B.	SHEET NO:  <b>5</b> 5 OF 13
DATE DRAWN: 12-07-09	DRAWN BY: M.W.W.	
SCALE: 1" = 60'	Date Last Revised:	

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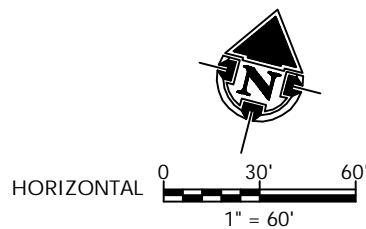
Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 920-23L

WELL PAD - FACILITIES DIAGRAM  
NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS  
LOCATED IN SECTION 23, T9S, R20E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



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ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

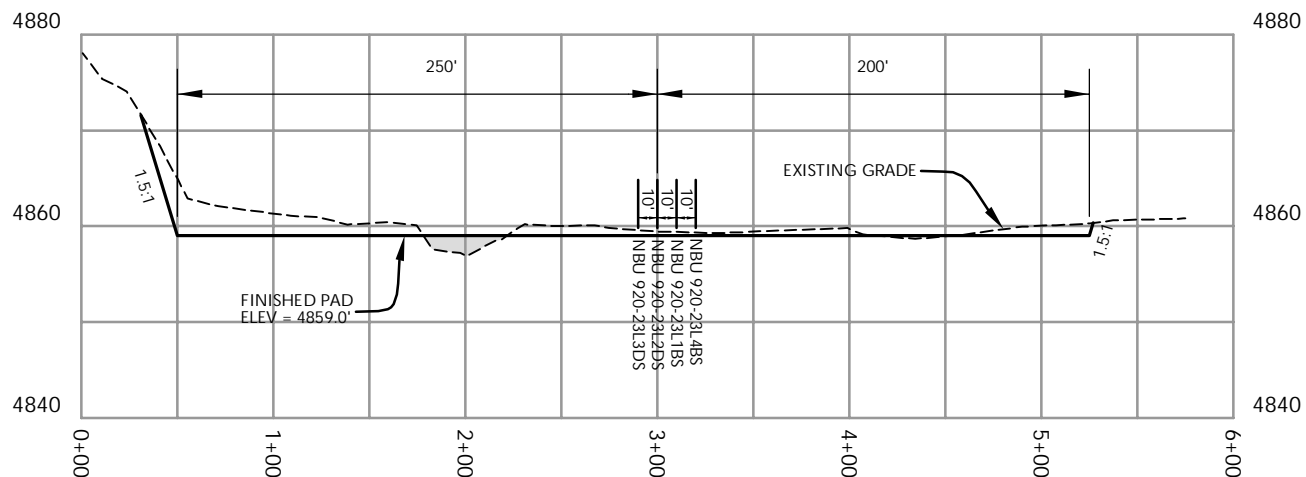
WELL PAD LEGEND		
	EXISTING WELL LOCATION	
	PROPOSED WELL LOCATION	
	PROPOSED SALES LINE	

Scale: 1"=60'	Date: 2/18/09	SHEET NO: <b>6B</b> 6B OF 13
REVISED:	SEA 1/05/10	

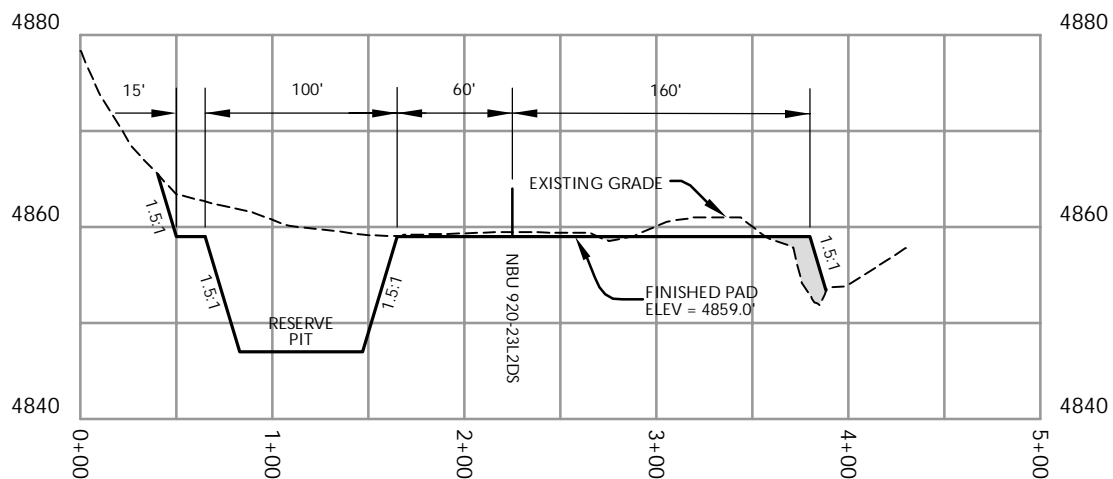
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**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS  
MAXIMUM RESERVE PIT DEPTH.

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1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 920-23L

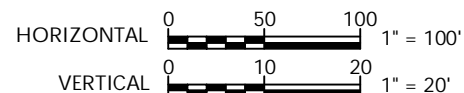
WELL PAD - CROSS SECTIONS  
NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS  
LOCATED IN SECTION 23, T9S, R20E,  
S.L.B.&M., UTAH COUNTY, UTAH.



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209 NORTH 300 WEST - VERNAL, UTAH 84078

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Scale: 1"=100'	Date: 2/18/09	SHEET NO:
REVISED:	SEA 1/05/10	7 7 OF 13

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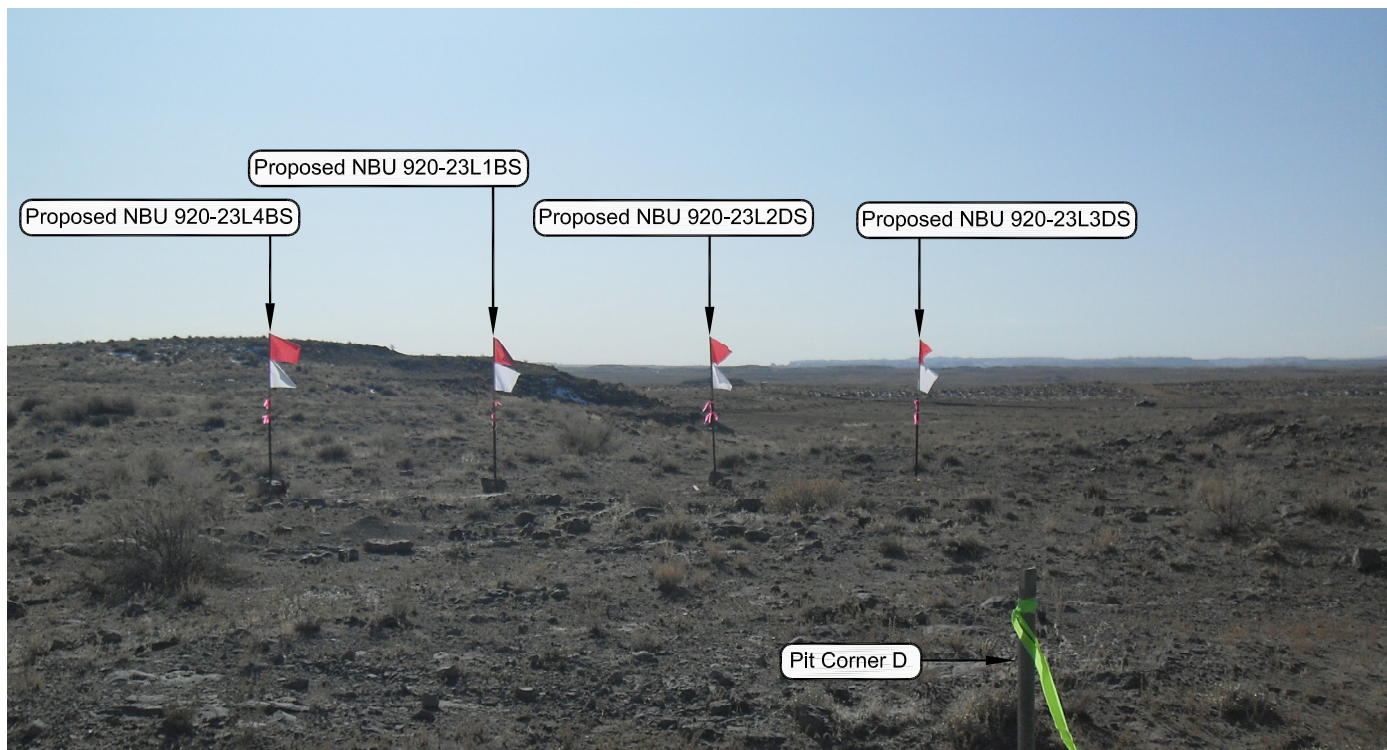


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHERLY

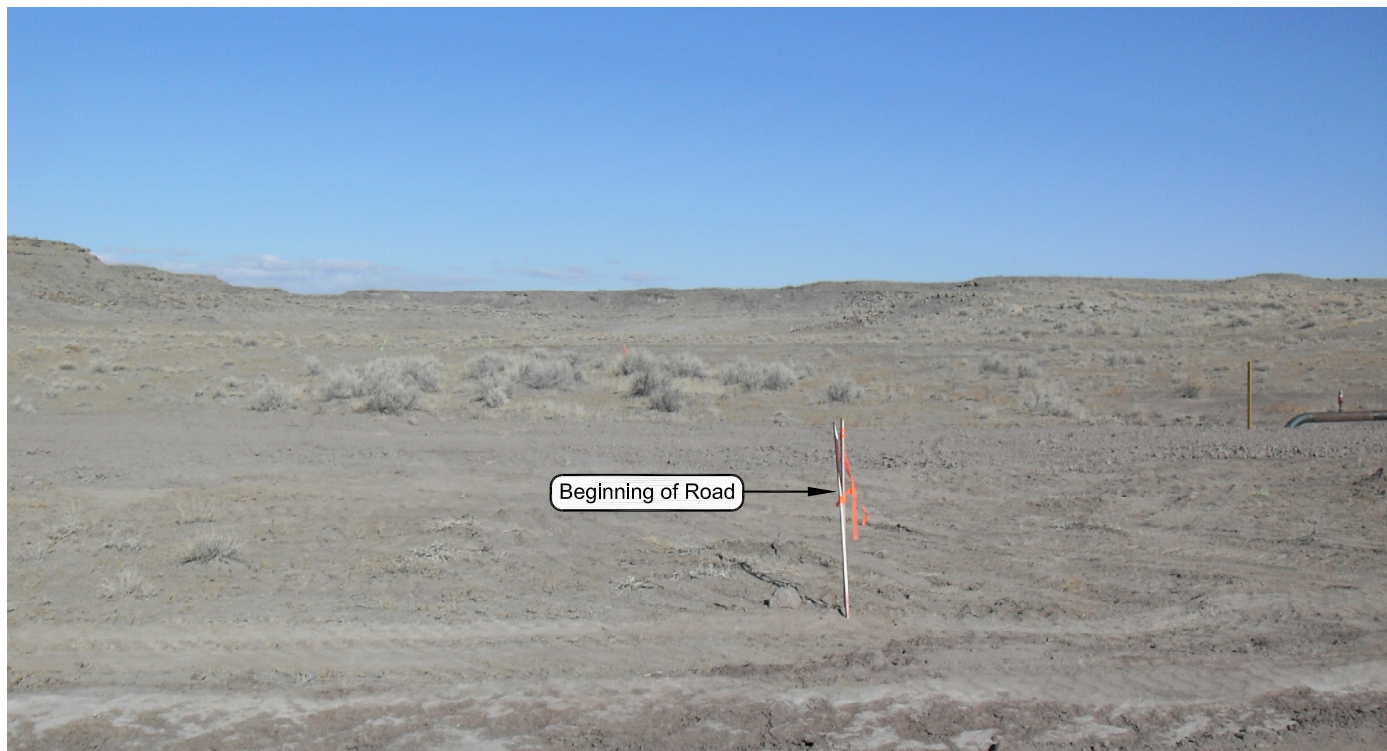


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**Well Pad - NBU 920-23L**

**NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS  
LOCATION PHOTOS  
LOCATED IN SECTION 23, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH.**



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**TIMBERLINE**

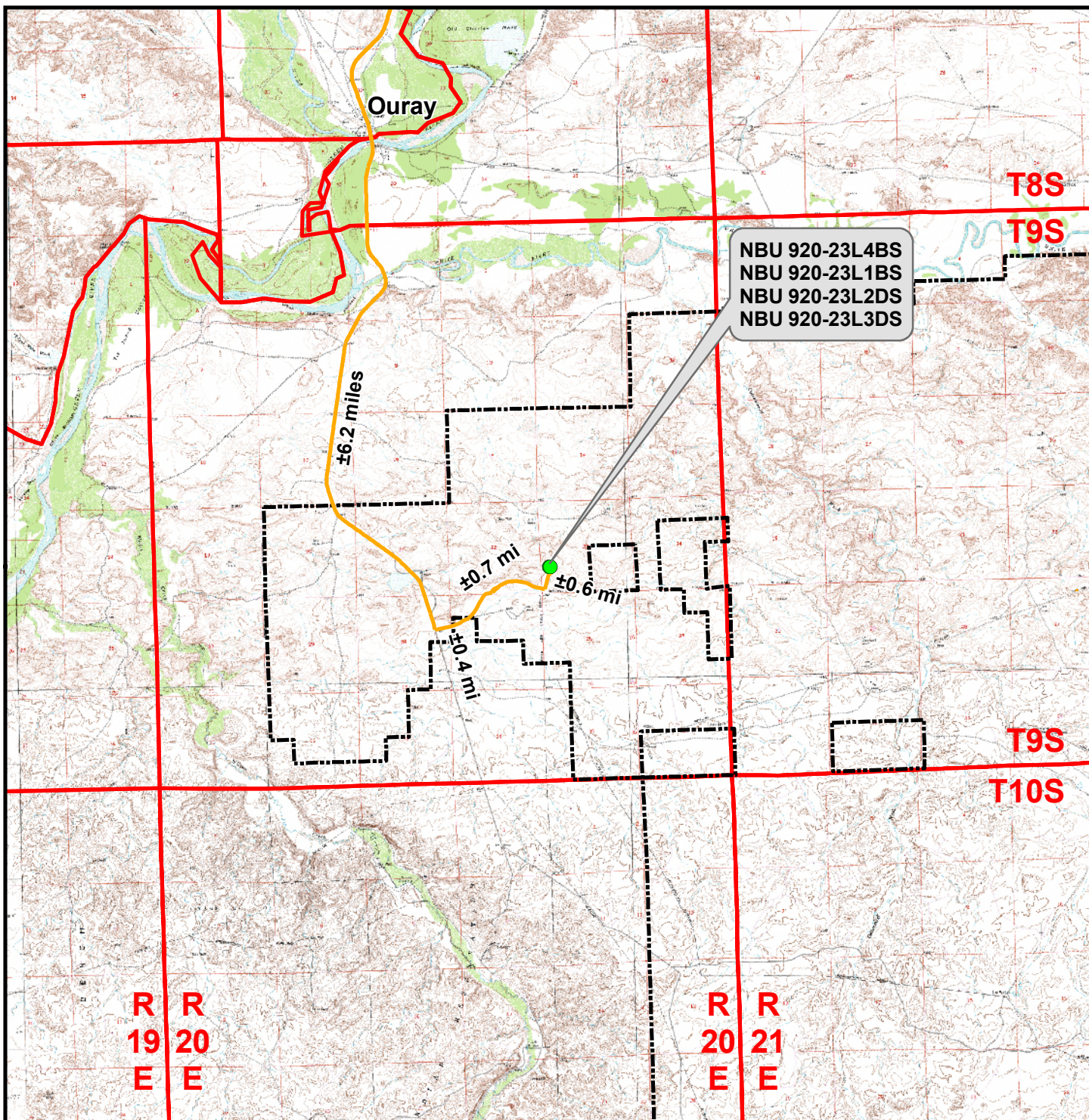
(435) 789-1365

**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 12-03-09	PHOTOS TAKEN BY: M.S.B.	SHEET NO:  <b>8</b>  8 OF 13
DATE DRAWN: 12-07-09	DRAWN BY: M.W.W.	
Date Last Revised:		

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### Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 920-23L To Unit Boundary:  $\pm 2,100$ ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### Well Pad - NBU 920-23L

NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS

Topo A

Located in Section 23, T9S, R20E  
S.L.B.&M., Uintah County, Utah

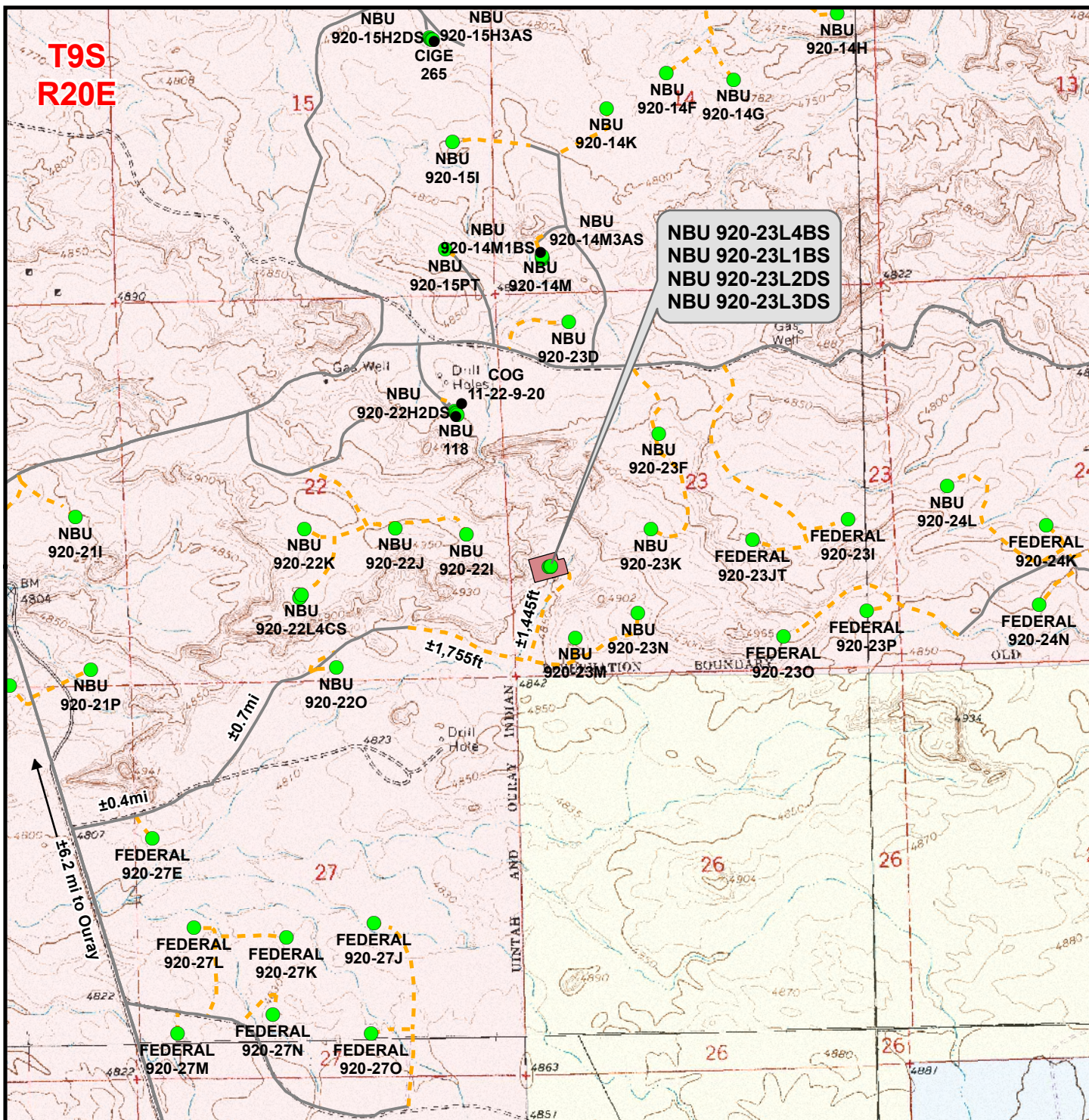


Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 16 Nov 2009	<b>9</b>
Revised: JELO	Date: 8 Jan 2010	

9 of 13

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## Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Existing
- - - Road - Proposed
- Bureau of Land Management
- Indian Reservation
- State
- Private

Total Proposed Road Length: ±1,445ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### Well Pad - NBU 920-23L

NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS

Topo B

Located in Section 23, T9S, R20E  
S.L.B.&M., Uintah County, Utah

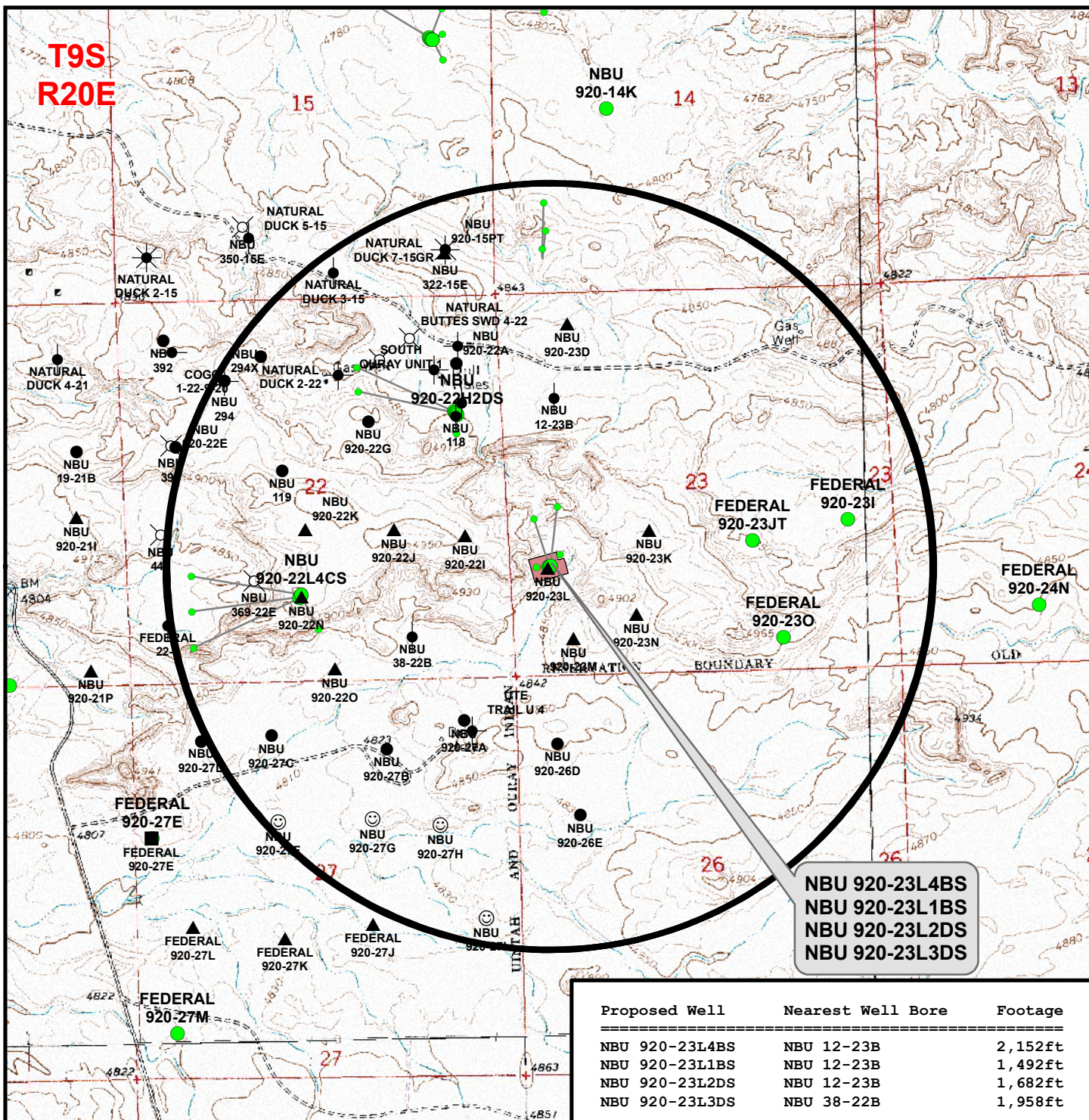


Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: 10 of 13

Drawn: JELO | Date: 16 Nov 2009  
Revised: JELO | Date: 8 Jan 2010

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Proposed Well	Nearest Well Bore	Footage
NBU 920-23L4BS	NBU 12-23B	2,152ft
NBU 920-23L1BS	NBU 12-23B	1,492ft
NBU 920-23L2DS	NBU 12-23B	1,682ft
NBU 920-23L3DS	NBU 38-22B	1,958ft

### Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Well Pad
- Well - 1 Mile Radius

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### Well Pad - NBU 920-23L

NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS

Topo C  
Located in Section 23, T9S, R20E  
S.L.B.&M., Uintah County, Utah



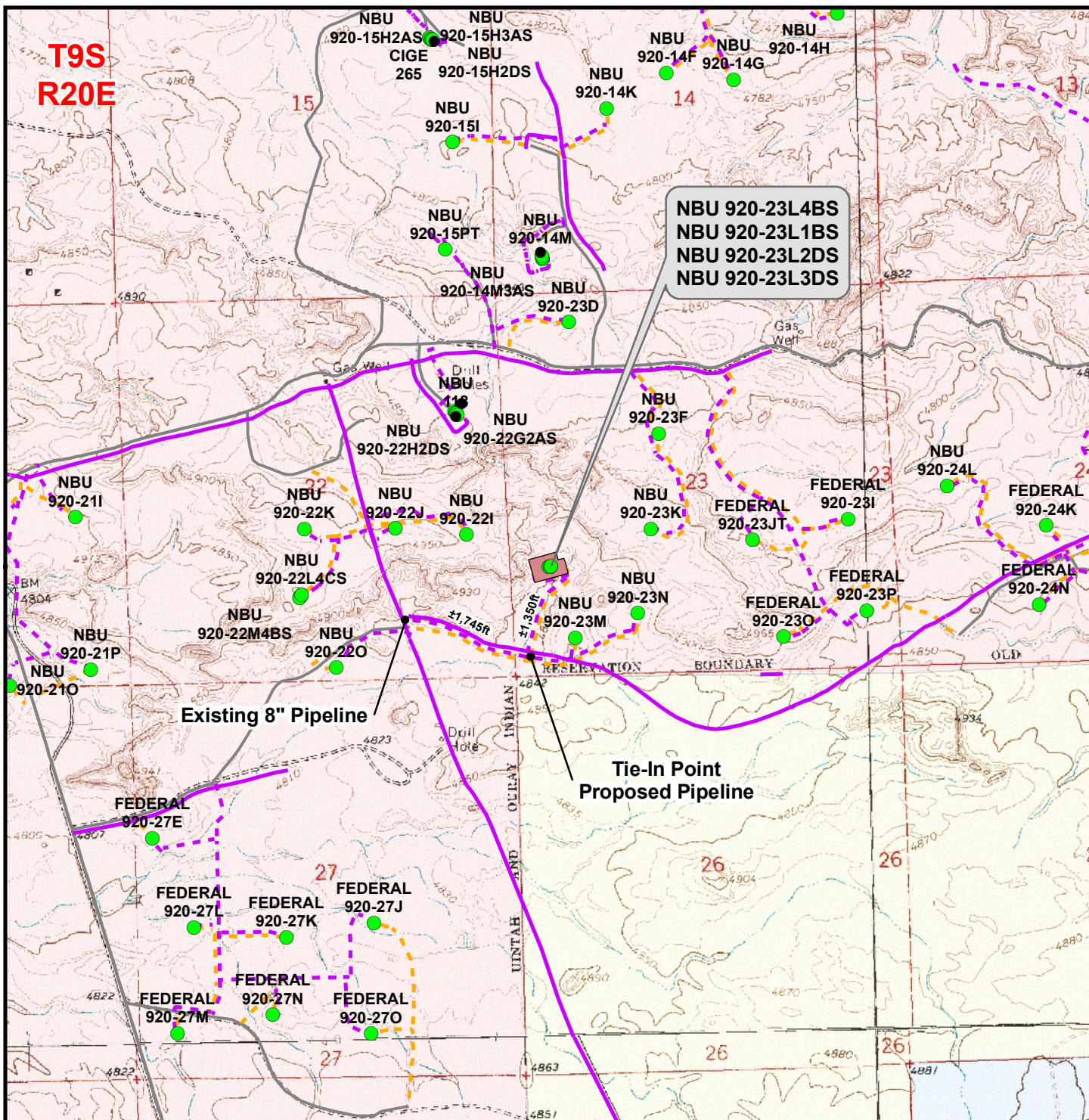
- Producing
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- Location Abandoned
- Dry hole marker, buried
- Returned APD (Unapproved)
- Active
- Spudded (Drilling commenced; Not yet completed)
- Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- Inactive
- Drilling Operations Suspended

Scale: 1" = 2,000ft | NAD83 USP Central | Sheet No: **11** 11 of 13

Drawn: JELO | Date: 16 Nov 2009  
Revised: JELO | Date: 8 Jan 2010

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### Legend

- |                   |            |                           |                                 |                           |
|-------------------|------------|---------------------------|---------------------------------|---------------------------|
| ● Well - Proposed | ■ Well Pad | - - - Pipeline - Proposed | - - - Pipeline - To Be Upgraded | - - - Pipeline - Existing |
| ● Well - Existing |            | - - - Road - Proposed     | - - - Road - Existing           |                           |
|                   |            |                           | ■ Bureau of Land Management     | ■ State                   |
|                   |            |                           | ■ Indian Reservation            | ■ Private                 |

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### Well Pad - NBU 920-23L

NBU 920-23L4BS, NBU 920-23L1BS,  
NBU 920-23L2DS & NBU 920-23L3DS

Topo D

Located in Section 23, T9S, R20E  
S.L.B.&M., Uintah County, Utah



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 16 Nov 2009	<b>12</b> 12 of 13
Revised: JELO	Date: 8 Jan 2010	

**RECEIVED** April 07, 2010



**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD: NBU 920-23L**  
**WELLS: NBU 920-23L4BS, NBU 920-23L1BS,**  
**NBU 920-23L2DS & NBU 920-23L3DS**  
**Section 23, T9S, R20E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 6.2 MILES TO THE INTERSECTION OF A CLASS D COUNTY ROAD TO THE EAST. EXIT LEFT AND PROCEED IN AN EAST BY NORTHEAST DIRECTION ALONG THE CLASS D COUNTY ROAD APPROXIMATELY 0.4 MILES TO A SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.7 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN AN EASTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 3,200 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.6 MILES IN A SOUTHERLY DIRECTION.





Kerr-McGee Oil & Gas Onshore LP  
PO Box 123778  
Denver, CO 80217-3778

March 1, 2010

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 920-23L3DS  
T9S-R20E  
Section 23: NWSW (Surf & BH)  
Surface: 1489' FSL, 507' FWL  
Bottom Hole: 1491' FSL, 335' FWL  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 920-23L3DS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,  
**KERR-MCGEE OIL & GAS ONSHORE LP**

  
Lynn Padgett  
Staff Landman

enclosures

**RECEIVED** April 07, 2010



CLASS I REVIEW OF  
KERR-MCGEE OIL & GAS ONSHORE LP'S  
PROPOSED NBU 920-23L1BS,  
NBU 920-23L2DS, NBU 920-23L3DS, AND  
NBU 920-23L4BS WELL LOCATIONS  
(T9S, R20E, SECTION 23)  
UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

Ute Indian Tribe  
Uintah and Ouray Agency

Prepared Under Contract With:

Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 09-180

March 11, 2010

United States Department of Interior (FLPMA)  
Permit No. 10-UT-60122

Ute Tribal Permit No. A09-363

**RECEIVED** April 07, 2010



## **Paleontological Reconnaissance Survey Report**

---

**Survey of Kerr McGee's Proposed Well Pads, Access Roads  
and Pipelines for "NBU #920-23L, 23L4BS, 23L1BS,  
23L2DS & 23L3DS" and "NBU #920-29P"  
(Sec. 23, 28 & 29, T 9 S, R 20 E)**

Big Pack Mtn NW & Ouray  
Topographic Quadrangle  
Uintah County, Utah

May 12, 2009

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078





# Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237

(303) 759-5377 Office (303) 759-5324 Fax

## **SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT**

**Report #:** GCI #43-revised March 9, 2010

**Operator:** Kerr-McGee Oil & Gas Onshore LP

**Wells:** Vertical wells: NBU 920-23D, NBU 920-23F, NBU 920-23K, NBU 920-23M, NBU 920-23N, Federal 920-23I, Federal 920-23JT, and Federal 920-23-P

Directional well: NBU 920-23L (bores: NBU 920-23L4BS, NBU 920-23L1BS, NBU 920-23L2DS, and NBU 920-23L3DS)

**Pipelines:** Proposed pipelines leading to all proposed wells

**Access Roads:** Access roads lead to all proposed wells

**Location:** Section 23, Township 9 South, Range 20 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*) and nesting raptors

**Date:** 06/15/2009, 06/16/2009, and 06/18/2009

**Observers:** Grasslands Consulting, Inc. Biologists: Chris Gayer, Nick Hall, BJ Lukins, Jay Slocum, Dan Hamilton, Matt Kelahan, and Jonathan Sexauer

Technicians: Chad Johnson

**Weather:** Partly cloudy, 80-85°F, 0-5 mph winds with no precipitation



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-23L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1489 FSL 0507 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 23 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505730000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 8/12/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px; vertical-align: middle;"></span>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: August 23, 2010

By:

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 8/12/2010





## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047505730000

**API:** 43047505730000

**Well Name:** NBU 920-23L3DS

**Location:** 1489 FSL 0507 FWL QTR NWSW SEC 23 TWNP 090S RNG 200E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 8/11/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Danielle Piernot

**Date:** 8/12/2010

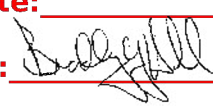
**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date:** August 23, 2010

**By:** 

**RECEIVED** August 12, 2010



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-23L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1489 FSL 0507 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 23 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505730000
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 7/12/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> <b>APD EXTENSION</b>          OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span> </div> </div>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.		
<b>Approved by the Utah Division of Oil, Gas and Mining</b>  <b>Date:</b> 07/12/2011 <b>By:</b> 		
<b>NAME (PLEASE PRINT)</b> Gina Becker		<b>PHONE NUMBER</b> 720 929-6086
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst II
<b>DATE</b> 7/12/2011		





## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047505730000

**API:** 43047505730000

**Well Name:** NBU 920-23L3DS

**Location:** 1489 FSL 0507 FWL QTR NWSW SEC 23 TWNP 090S RNG 200E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 8/11/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Gina Becker

**Date:** 7/12/2011

**Title:** Regulatory Analyst II **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**RECEIVED** Jul. 12, 2011



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

SEP 21 2011

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

BLM

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU0577A
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE		6. If Indian, Allottee or Tribe Name
Contact: DANIELLE E PIERNOT Mail: danielle.piernot@anadarko.com		7. If Unit or CA/Agreement, Name and/or No. UTU63047A
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156	8. Well Name and No. NBU 920-23L (3DS)
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 23 T9S R20E NWSW 1489FSL 507FWL 40.017653 N Lat, 109.641310 W Lon		9. API Well No. 43-047-50573-00-X1
		10. Field and Pool, or Exploratory NATURAL BUTTES
		11. County or Parish, and State UINTAH COUNTY, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original PD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. The original APD was approved on 10/18/2009.

Please note that there is a sundry notice pending to change the well name for this location. This well was originally permitted as the NBU 920-23L.

Please contact the undersigned with any questions and/or comments. Thank you.

Thank you.

**CONDITIONS OF APPROVAL ATTACHED**

RECEIVED

NOV 18 2011

DIV. OF OIL, GAS &amp; MINING

VERNAL FIELD OFFICE	
ENG. <i>RHA</i>	<i>11/11/11</i>
GEOL. _____	
E.S. _____	
PET. _____	
RECL. _____	

14. Thereby certify that the foregoing is true and correct.

Electronic Submission #118111 verified by the BLM Well Information System  
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal  
Committed to AFMSS for processing by ROBIN R. HANSEN on 09/21/2011 (11RRH4157SE)

Name (Printed/Typed) DANIELLE E PIERNOT

Title REGULATORY ANALYST II

Signature (Electronic Submission)

Date 09/21/2011

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By <i>[Signature]</i>	Assistant Field Manager Title Lands & Mineral Resources	NOV 17 2011
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	VERNAL FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

UDOGM

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***



# **CONDITIONS OF APPROVAL**

## **Kerr McGee Oil and Gas Onshore LP.**

### **Notice of Intent APD Extension**

**Lease:** UTU-0577A  
**Well:** NBU 920-23L  
**Location:** NWSW Sec 23-T9S-R20E

An extension for the referenced APD is granted with the following conditions:

---

1. The extension and APD shall expire on 10/16/2013.
2. No other extension shall be granted.

If you have any other questions concerning this matter, please contact Robin L Hansen of this office at (435) 781-2777



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-23L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1489 FSL 0507 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 23 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505730000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>8/11/2012</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE   <input type="checkbox"/> CHANGE TO PREVIOUS PLANS   <input type="checkbox"/> CHANGE WELL STATUS   <input type="checkbox"/> DEEPEN   <input type="checkbox"/> OPERATOR CHANGE   <input type="checkbox"/> PRODUCTION START OR RESUME   <input type="checkbox"/> REPERFORATE CURRENT FORMATION   <input type="checkbox"/> TUBING REPAIR   <input type="checkbox"/> WATER SHUTOFF   <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING   <input type="checkbox"/> CHANGE TUBING   <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS   <input type="checkbox"/> FRACTURE TREAT   <input type="checkbox"/> PLUG AND ABANDON   <input type="checkbox"/> RECLAMATION OF WELL SITE   <input type="checkbox"/> SIDETRACK TO REPAIR WELL   <input type="checkbox"/> VENT OR FLARE   <input type="checkbox"/> SI TA STATUS EXTENSION   <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR   <input type="checkbox"/> CHANGE WELL NAME   <input type="checkbox"/> CONVERT WELL TYPE   <input type="checkbox"/> NEW CONSTRUCTION   <input type="checkbox"/> PLUG BACK   <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION   <input type="checkbox"/> TEMPORARY ABANDON   <input type="checkbox"/> WATER DISPOSAL   <input checked="" type="checkbox"/> <b>APD EXTENSION</b>           OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.		
<b>Approved by the Utah Division of Oil, Gas and Mining</b>  <b>Date:</b> August 09, 2012 <b>By:</b>		
<b>NAME (PLEASE PRINT)</b> Danielle Piernot		<b>PHONE NUMBER</b> 720 929-6156
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst
<b>DATE</b> 8/9/2012		





The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047505730000**

API: 43047505730000

Well Name: NBU 920-23L3DS

Location: 1489 FSL 0507 FWL QTR NWSW SEC 23 TWNP 090S RNG 200E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 8/11/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Danielle Piernot

Date: 8/9/2012

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

**RECEIVED: Aug. 09, 2012**



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-23L3DS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1489 FSL 0507 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWSW Section: 23 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505730000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>8/11/2013</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> <b>APD EXTENSION</b>          OTHER: <input style="width: 100px;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.		
<div style="text-align: right;"> <b>Approved by the</b>  <b>Utah Division of</b>  <b>Oil, Gas and Mining</b>   <b>Date:</b> July 22, 2013  <b>By:</b> </div>		
<b>NAME (PLEASE PRINT)</b> Teena Paulo		<b>PHONE NUMBER</b> 720 929-6236
<b>SIGNATURE</b> N/A		<b>TITLE</b> Staff Regulatory Specialist
<b>DATE</b> 7/19/2013		





**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Request for Permit Extension Validation Well Number 43047505730000**

**API:** 43047505730000

**Well Name:** NBU 920-23L3DS

**Location:** 1489 FSL 0507 FWL QTR NWSW SEC 23 TWNP 090S RNG 200E MER S

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**Date Original Permit Issued:** 8/11/2009

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- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Teena Paulo

**Date:** 7/19/2013

**Title:** Staff Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.





## Kerr-McGee APDs to Rescind

Paulo, Teena <Teena.Paulo@anadarko.com>  
To: "dianawhitney@utah.gov" <dianawhitney@utah.gov>

Wed, Jul 9, 2014 at 8:39 AM

Good Morning Diana,

Please see the below list of wells for the APD's that Kerr-McGee requests to rescind with UDOGM.

Well Name	API Number
NBU 920-22N1DS	<a href="#">4304750560</a>
NBU 920-23L3DS	<a href="#">4304750573</a>

Thank you,

Teena Paulo  
Staff Regulatory Specialist  
Anadarko Petroleum  
1099 18th Street, Suite 600  
Denver, CO 80202

[Click here for Anadarko's Electronic Mail Disclaimer](#)





GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER

Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA

Division Director

July 25, 2014

Tenna Paulo  
Kerr-McGee Oil & Gas Onshore, LP.  
1099 18th Street, Suite 600  
Denver, CO 80217

Re: APD Rescinded – NBU 920-2313DS, Sec. 23, T.9S, R.20E  
Uintah County, Utah API No. 43-047-50573

Dear Ms. Paulo:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on August 11, 2009. On August 23, 2010, July 12, 2011, August 9, 2012 and July 22, 2013 the Division granted a one-year APD extension. On July 9, 2014, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby **rescinded**, effective July 9, 2014.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal

